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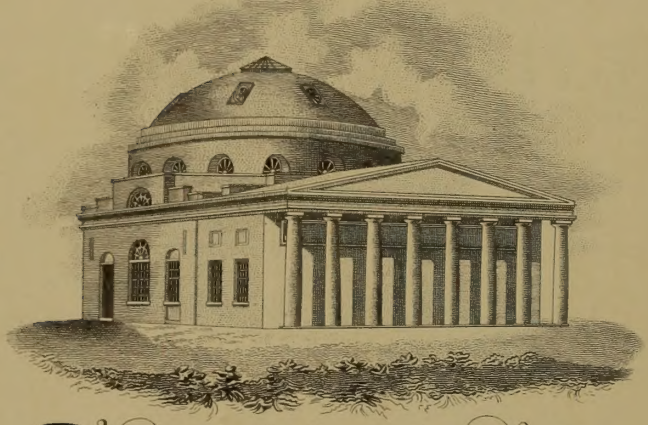

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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UNIVERSITY OF MARYLAND

THESES

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[1] Could be 1877 (Cordell).

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1851-1892; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

UNIVERSITY OF MARYLAND

THESES

1876(a)

Cole, Wm. J. Jr.	Phthisis Pulmonalis	26p.
Davison, Wm.	Variola	38p.
Filler, C. W.	Six Medical Cases	21p.
Lynde, F. M.	Diphtheria	23p.
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Noble, J. L.	Opium	24p.
Beeler, G. B.	Acute Articular Rheumatism	40p.
Forbes, J. S.	Asthma	11p.
Rebman, G. A.	Bronchitis	32p.
Marsh, W. H.	Hemiplegia	34p.
Renner, W. M.	Scarlet Fever	16p.
Gorsuch, F. H.	Lead	26p.
Biedler, H. H.	Diphtheria	35p.

Treatise on

Phthisis Pulmonalis

Respectfully Submitted

to the Faculty

of the

University of Maryland

1876.

WMb
18971

Phthisis Pulmonalis.

Various names have been affixed to this disease, and they are significant in view of the wasting of the body but not distinctive, inasmuch as progressive emaciation, belongs to the history of other affections as well as this, and is seen to as great if not greater extent.

The term pulmonary tuberculosis, is sometimes used to denote this disease, But it is also open to objections, it having hitherto been used (according to Flint) to embrace the affection to which has been of late affixed the name of pneumonia with various prefixes.

The term phthisis pulmonalis, now used among medical men as much if not more than any other, seems to be the most appropriate. It is derived from, pulmo, the lung, and phthisis from the greek word (φθίω, I waste away). Of the diseases affecting the human family, this may be said to be the most important; prevailing more or less in every quarter of the world, and occasions exclusively of those that prevail endemically, or epidemically, a greater proportion of deaths, than any other.

According to Hinds Statistics, estimating the population of the world, at nine hundred and eighty eight

millions, Three millions die annually of this disease.

This disease may be, and is by some authors divided into three stages, acute, Chronic and latent, by others into two, acute and Chronic, The earliest indications indications are a hasting cough slight or severe, or with a hemorrhage, dyspepsia and general debility, or it may be with laryngitis, increasing slowly but too surely until it becomes a constitutional disease, Then the patient will have pains about the chest, frequent Cough, hemorrhage in a majority of cases, and in all cases according to our eminent-

teacher, prof. McSherry, the pulse is accelerated, the temperature higher, than normal, the ~~respiration~~ hurried with the paroxisms of hectic fever, sometimes Chills, followed by fever, with a flush of the cheeks, night-sweats and emaciation, on the first. arrest of menstruation, Colliquative-diarrhoea and sometimes delirium and death occurring mainly from exhaustion or suffocation. The patient generaly keps up his spirits and is not only cheerful, but has hopes of life, to the last.

The causes of phthisis pulmonalis may be divided into two classes. First those that act upon the lung

locally, and second those that act upon the system generaly, producing the constitutional condition. As regards the local causes, it may be said that they do not produce the disease but only act as exciting causes. The disease may occur in connection with some other pulmonary affection, as bronchitis or pneumonitis, or it may be produced by them - but these affections occur so often without being followed by this that they can not be said to have any special tendency to this result. - and on the other hand, phthisis pulmonalis occurs so often when these diseases do not exist.

The inhalations of particles of metal, particularly by those who work in foundrys and shops at their trade, also of sand, coal dust &c. have been said to be irritating causes. Facts show that by far the greatest cause of phthisis in a large proportion of cases is inheritance. Why this is so we can not tell. This conclusion rests on observation.

It is not only often remarked, but occurs, that the Children of consumptive parentage will become consumptive. Yet not in every case can we come to this conclusion, for the parent may have contracted the disease subsequently, when at the time of

conception, no such disease existed. I know of a case, when the hereditary influence was most strikingly shown. The case was that of five children. The mother died of consumption about a year after giving birth to her child. Her seven child died of pneumonia at the age of ten years. The three youngest died of consumption between the ages of fifteen and twenty one years. The eldest child is still living and of robust health. So that it is not irrational to come to the before noted conclusion that the hereditary and congenital influence go to make up a large -

proportion of the cases. Age is of no consequence, although it is true that it occurs at certain ages more often than at others, between that of twenty and thirty years. But any age is liable to it even to the foetus in utero.

Climate may influence the disease to a certain extent. For instance those living in moist or changeable climates are more liable to contract the disease than those who live in one more uniform and dry- and again a patient if in the incipiency of the disease living in a changeable climate, be sent to one that is uniform and dry such as Florida most benefit may be

derived from it. Cold does not seem to exert any influence to the disease rather a protection against it. As in the elevated alpine situations the disease is almost unknown. And the inhabitants of Iceland, are entirely exempted from it. It prevails to a much greater extent in large cities, than in the country, showing the influence of pure air. In regard to season, the disease is more often developed, in the mild and hot months of summer, than during the rest of the year. The influence of deficient exercise, imperfect ventilation, light, and sedentary habits is great, in causing a debilitated

and delicate constitution and thereby developing the tuberculous diathesis.
The use of alcoholic drink, according to post mortem researches cannot be said to tend to the production of the disease, but rather to act as a preventive.
Whether this disease is contagious or not is not definitely known. It is thought by some that it may be caused, or if in the system developed by the inhalation of the breath of the affected persons, as by sleeping with them, or otherwise.
The anatomical characters are dissemination of tubercle commencing at the apex and gradually invading the entire lung tissue. There is especially two products embraced under the name of tubercle.

The first of these is the product known as gray tubercle or miliary granulation, they are semitransparent and in the form of small round bodies of a grayish color having a considerable resistance to pressure they are small in size sometimes scarcely visible with the naked eye, but more often resemble both in size and appearance Millet or hemp seeds. They may be numerous or not according to the case, When they exist in the lung in considerable numbers they characterise the affection known as acute phthisis or galloping consumption and life is destroyed in consequence of their accumulation sufficiently to,

compromise to a fatal extent- the functions of respiration, Some pathologists regard the gray tubercle as the only true tuberculous product. Bayle, who was the first to describe these bodies, under the name of miliary granulation, deny their tuberculous character regarding the second product- or yellow-tubercle, as the only true tubercle. This product- known as yellow-tubercle, is an exudation which takes place, in the pulmonary air-cells or alveoli. It is of a cheesy consistency, presented in small isolated round masses. It is friable and easily broken down

After a time the masses undergo softening, and they are thus converted into a creamy liquid analagous to pus, and form abscesses, or vomicae. And by changes involve destruction of the lung structure in proportion to the amount of morbid product.
In rare instances the contents of these abscesses are absorbed, and cicatrization of the walls of the cavity results, constituting a cure. By some theorists, these two products, gray and yellow tubercle are considered identically the same differing only in stage. Thus the so called yellow tubercle is an

inflamatory product of the gray or true tubercle. This theory is under discussion at the present time.

Phthisis pulmonalis may be brought on or complicated with, circumscribed bronchitis, Chronic or interstitial = pneumonitis, Circumscribed pleuritis, and many other affections which it is needless for me to mention.

Diagnosis. The diagnosis of this disease, is made comparatively easy by means of the physical signs, which are obtained by auscultation, percussion, palpation, and mensuration, taking into consideration also the history &c. of a patient.

There is on the affected side a characteristic depression at the upper part of the chest just under the clavicle, caused by the diminished volume of the lung. The scapula is restrained in its movements in inspiration on the side most affected, contrasting with that of the opposite scapula. This is seen in a certain proportion of cases. On percussion we have dullness and flatness over the affected portion. Tympanitic cracked metal sound, and amphoric resonance, over a circumscribed space tells the existence and situation of cavities. The auscultatory sound is cavernous

bronchial, or broncho vesicular representing solidification to a greater or less extent, and also the existence of cavities.
Also taking in connection with these symptoms others such as cough emaciation expectoration &c. The physician is seldom wrong in his conclusion.

Prognosis. Very little can be said in the direction of recovery. It is always or in far the greatest majority of cases unfavourable, and can be embraced in this short sentence "viz" death is the rule sooner or later – cure the rare exception.

Treatment. Prevention is better than cure. In the treatment of phthisis an early diagnosis is of great aid and importance. As far as the tuberculous cachexia is concerned there is no known remedy, or medicine, that we can say with a certainty will exert a specific curative influence over this disease. Various remedies have been tried, but so far have resulted in palliation only. This is by no means saying that medicines are not useful in phthisis, for when we can only palliate the suffering we confer a great boon upon the sufferer by smoothing the road to his goal. Then again we might by chance discover a remedy for this

dread disease, and this can only be done by experimenting with different medicines. For there is no telling what science can not do or will not do, with its vast resources.
Important indications are to be met by medicines. But first of all and with far more reliance is to be placed hygiene. Prophylaxis is of the first importance. To keep the digestive organs in a good condition, butter fat, raw milk, good and the purer the better, while good and abundant food is necessary, it is not good nor wise to carry this to excess for fear of causing dyspepsia. The food must bear relation to the habits of life, active exercise in

the open air, to expand the muscels and produce a pleasant and wholesome glow. This must not be carried too far for like every thing else it is capable of doing harm as well as good, and therefore should be moderate, not exhausting. Good bathing, using judgment in the application, the water to be comfortable to the patient. tepid water is preferable to cold, or if this is not convenient, rapid sponging in a warm chamber, taking exercise afterwards to get the circulation to acting. The predisposed should be well clothed both in winter and summer flannel should be worn next to the skin. The lodgings should be warm dry and airy. They should

be well ventilated. but the patient should not sit nor sleep, or be in anway in the draft. They should avoid foul air. Healthy and diseased persons should not occupy the same bed nor the same room espacialy the predisposed. Starch mineral albuminous and oleaginous matters are indicated. Tubercle is albuminous matter incapable of organization, and a supply of fat is necessary. Cod liver oil more easy of assimilation than any other is the most valuable remidy of phthisis it is readily digestable. Its effects are to nourish the body diminish the cough and check fresh expectation of tuberculous matter. Although the kind of Cod liver oil is not of much importance, the -

quality is of great importance. It should be perfectly sweet: Unfortunately however in quite a number of persons the stomach turns against this oil, When this is the case, it is quite in vain to urge it: Milk may partly take its place. But fats may be introduced into the system by other means, as fat meats, or we may try some one of the vegitable oils as olive or sunpseed oil, Or fat bacon in some form, We may give codliver oil in combination with whiskey a table= spoonful of whiskey with the same amount of oil. Alcohol though variously estimated by different physicians is well established a a remedial & at all events a supporting agent of great

value in consumption. It is not to be used in excess nor ever to produce excitement in any degree, but simply as an addition to the diet, and a supporter of the system of the invalid. The dose must therefore be proportioned to this condition. Whiskey is preferred by many but ale lager beer and wine suit different persons best; a little two or three times a day, will be better than a full drink at one time, Alway begin with very small quantities - say two or three teaspoonfuls of whiskey, or half a glass or less of wine, or half a tumblers full of ale, or beer. To do good the stimulant should not quicken the pulse, flush the face or be felt to

affect the head. When it can be done, alcoholic stimulant is best given with nourishment, as in Milk, or beaten up with a raw egg. Iron especially the tincture of the Chloride, and the iodide are frequently suitable; and so may quinine, nux vomica, or the simple bitter tonics. But the patient must not be worried, and disgusted with much medicine; whatever depresses appetite is likely to do more harm than good. The blistering of a section in the arm on the affected side may sometimes prove useful in the treatment of this disease. The cough, and expectoration, should be combated by emetics, or stimulants

and expectorants - The latter require discretion in their use. Those of a mawseant kind must be very sparingly prescribed. The syrup or cold infusion, of wild Cherry is one of the most suitable. Squills will answer when loosening effect is particularly required. Ipecac and tartar emetic although sometimes used, are too depressing to the stomach for the consumptive. Sometimes at a late stage Carbonate of ammonium will not be too stimulant. The throat should be examined for an elongated uvula that may be exciting and keeping up the cough. If so astringents should

be applied directly to it, or clipping should be resorted to. Anodynes and calmatives, as the case advances may be necessary to soothe the wearisome cough, and to give rest at night; Hyoscyamus, Lactucarium, hydrate of Chloral, and opium or morphia in some form, will be important sources of comfort to the patient, and may economize his strength. Nausea may be prevented by a mixture containing Creasote, Hæmoptysis, when excessive give Elixir of vitriol, ten to twenty drops in water, or nitrate of potash, or Veratrium Viride. To subdue local inflamation and pains in the Chest; A Burgundy pitch plaster over the breast, Liniments to the spine as -

Stokes or red pepper and whiskey, Bella-
donna plasters - tincture of iodine, or castor
oil may be used. Change of Climate is often
proposed for the benifit of the patient,
When to forbid or advise it, may be a very
delicate question, More will depend upon
the rate of progress, than upon the period
of the disease. In selecting a climate
for the invalid -- That climate, which
on account of its equability and dryness
will allow the patient the greatest
number of days out of doors, will be the
best —.

February 14th 1876 Wm J. Gibbs Jr

Variola.

This is an eruptive febrile disorder, eminently contagious, & also inoculative. No age possesses immunity from its attacks, though it rarely occurs a second time in the same individual. Previous to the discovery of the protective power of vaccination by Benj. Jesty of Glanceste-shire England & its subsequent adoption by the public

about the close of the last century - this was one of the most dreaded, loathsome & fatal maladies in the catalogue of disease. Since that time however it has been shown of much of its terror the number of cases has been greatly lessened, & a milder type been imparted to the comparatively few which now occur. Most authors recognize two varieties of this disease namely, variola &

Varioloid. Ver...

are identical in
nature, the one
readily communi-
cating the other -
presenting the same
symptoms & running
through the same
stages they differ
essentially only in
gravity. Varioloid
embraces all those
cases where there
has been a previous
attack, vaccination
or inoculation. Oc-
curring under other
circumstances the
disease is properly

called varicella. The variolous eruption is said to be discrete when the pustules are isolated & confluent when they coalesce. In making this distinction however, we must regard the character of the eruption on the face & hands only, for the pustules on the abdomen even in the most malignant confluent forms are always isolated.
The progress of small-pox is marked by

four stages - first that of invasion followed successively by those of eruption, desiccation, & desquamation. The period of incubation varies from eight to fourteen days being longer in those cases which have been contracted by infection, & shorter where the disease has been communicated by inoculation. The initial stage of uncomplicated small-pox is usually ushered in abruptly with a

chill, followed or accompanied by febrile excitement as indicated by an accelerated pulse, a hot & dry skin, a furred tongue, anorexia & thirst. Sometimes a severe pain in the head, small of the back & epigastrium attended by obstinate irritability of the stomach & great muscular debility. In many children convulsions supervene at this time. When the eruption is to be a

constipation is often added to the primary symptoms, when confluent there is a tendency to diarrhoea. The characteristic eruption makes its appearance about the third day in minute red spots upon the face & neck from which points it gradually extends to all parts of the body. Simultaneously with this there is also an eruption upon the mucous membrane those lining the mouth

the disease they attain
their full size - with
an indentation - are
circular in form
& about one fourth of
an inch in diameter
Their central depres-
sion now disappears
their contents become
thick & turbid & they
are termed pustules.
In cases of benign
& discrete variola,
the fever which had
previously subsided
now returns & contin-
ues with more or less
violence until the
stage of desiccation

matter. The itching
is very annoying & the
pustules are frequently
ruptured by either the
scratching of the patient
or friction of the clothes.
The liquid contents of
each is of course dis-
charged adding greatly
to the discomfort of
the patient & leaving
a scab which retains
in a measure the form
& size of the pustule.
The contents of such as
preserve their integrity
is either evaporated
or absorbed & a scab
results. The odor from

The patient at this time is peevish & irritable. As the period of desiccation progresses (if the case is to terminate favorably) all the inflammatory symptoms subside & convalescence is finally established. The period ~~of desquamation~~ commences between the eleventh & eighteenth days; the crusts having formed in the order in which they first occurred assume a dark brown color & are successively

attacked. This stage lasts generally two or three days; but several weeks may elapse before all the scabs have fallen off. Each pustule leaves a purplish coloring which gradually fades, & a slight pit of a lighter color than the surrounding surface is the result. Such is the course usually pursued by variola in its simple form; but like many other diseases it is subject to various complications &

themselves in each particular case. Varioloid presents all the characteristic symptoms of variola, but they are usually of a milder type & of a somewhat shorter duration - The eruption is usually scanty & seldom presents itself before the fourth day often it aborts, & the patient may recover without being aware of the nature of his complaint. In rare instances however

phenomena is of the greatest importance in the patient. usually dies within twenty four hours. The pustulae upon the mucous membranes lining the larynx & trachea, may increase in number & enlarge in size to an extent which mechanically obstructs the air passages; or there may be the formation of a pseudo membrane as in true croup. This takes place most frequently with children.

the cuticle of where lungs & tubercles is visible. Death may occur suddenly, as in convulsions, when the constitution is apparently over-whelmed, & the patient sinks under the virulence of the poison. The anatomical lesions are numerous, but they do not differ materially from what has been noticed in other malignant diseases. The blood is of a dark color, the heart clots

disease, is accompanied an eruption; after its full development there should be no mistake. At first we may experience some difficulty in distinguishing between the variolous eruption & that of measles & scarlatina, but in the former of these complaints the eruption is less prominent & distinct to the touch, in the latter absence of pharyngitis should prevent error. The

treatment depends
in a great measure
upon the age of the
patient the vigor of
the constitution &
the form we have to
treat; but after due
consideration of
these points — in
confluent forms we
can give no positive
assurance of recovery
until convalescence
is completely estab-
lished. Variola is
almost always fatal
in children under
two years of age —
about the age of three

[illegible]
becomes its regular
course without
malignancy or in-
flammatory com-
plications. When the
patient is very young
or very old, plethoric
or much debilitated
or of intemperate
habits the prognosis
is rendered more
uncertain. There is
no specific remedy
for small-pox - the
treatment must be
conducted on ge-
neral principles.
Like other essential

cases it is self limited
though in its course
cannot with pro-
priety be abruptly
discontinued. The diet
should be simple
in the first stage &
the constitutional
treatment pallia-
tive & restoring
throughout. If there
is much febrile excite-
ment refrigerants
diaphoretics should
be administered.
Lemonade is a grate-
ful drink & may be
allowed in moderate
quantities. Acids

Mendereri or Carbolic acid water is often found serviceable. The amount of prostitution should be moderated if possible without impairing the strength. The effects of inflammation should be watched, & as far as practicable obviated in all the stages, & when required stimulants should be administered for the support of the system. Mild cases if not disturbed

will of themselves soon a favorable course – we should therefore content ourselves with guarding the patient from injurious influences. The apartment should be kept well ventilated, & the general comfort of the patient attended to & occasionally a laxative may be required. In those cases more active treatment is necessary. At the commencement of the

initial fever some
efficient purgative
may be given Calomel
or Rhubarb, Senna &
Salts or the Comp^d Cath.
Pill of the U.S. Pharma-
copoea answers a good
purpose - afterwards
the bowels should
be kept open with
Castor Oil Magnesia
or some other gentle
laxative. When there
is a tendency to
nausea or vomiting
Seidlitz Powders or
Cit^d of Pot in the form
of neutral mixture
will be found

serviceable. When
the fever runs high
Sponging with cold
water may be deemed
advisable; but this
agent should be
used with caution
remembering the
constant tendency
to internal inflam-
mations in this disease
Sponging with warm
water may be used
more extensively &
with decided ben-
efit. Bloodletting both
general & local are
sometimes indicated
but we should use

bear in mind the
long subsequent
struggle of sustaining
the strength against
the failing pulse
As a rule bleeding
should only be em-
ployed to avert
threatening danger
to some important
organ. The warm bath
Dovers Powders or Opium
& Calomel with full
doses Opium is
sometimes necessary
to relieve pain &
procure sleep. For
vomiting Carbolic
acid water, a

the eruption — when
done on the second
day it is said to be
infallible. In some
instances the Tr. of
Iodine has been ap-
plied to the erup-
tion with the effect
of causing the pus-
tule to abort + the best
means of preventing
pitting is the use
of mercurial ointment
It should be applied
at the very commence-
ment of the erup-
tion, when it is
thought to prevent
resolution of the

infective these pre-
venting suppura-
tion & the conse-
quent scars. Light
and air, are thought
by some to be essen-
tial to the com-
plete development
of the eruption -
consequently it may
be rendered abortive
by anything which
will exclude such
influences. Many
agents have been
used for this pur-
pose with varied
success. Sulph Zinc
or Calamine mixed

with Olive Oil applied
several times daily,
has in some instances
answered the pur-
pose. A saturated
solution of Gutta-
percha in Chloro-
form is also recom-
mended; but this
should not be used
until after the
pustules have fully
maturated or even
begun to decline,
otherwise the remedy
may be injurious.
Light & air may be
excluded by cover-
ing the part with

sufficient attention
should be given to
cleanliness & ven-
tilation, & in the
patient again
mixes with the
world his wearing
apparel should be
changed & his per-
son thoroughly
washed with soap
& warm water.

Wm Brunson.

Balt City.
Jan 17th 1876.

" "

[illegible]

The record of Ob[illegible]
cal cases under my
observation during the
last 12 months [illegible]
been connected with the Hospital
and others [illegible]
[illegible] 1st obstetrics, 2nd [illegible]
3rd other [illegible], [illegible]
[illegible] [illegible] [illegible]
[illegible], 4th [illegible]
5th surgical case and 6th patients
[illegible]
at 22 [illegible]. [illegible]
during [illegible]
[illegible], [illegible]
and sent for [illegible]
annual examination

August 15 I found the [illegible]
generally [illegible] On the
16 found her [illegible] not
sufficient for the child in
quantity and quality. I then
instructed the mother to have
plenty of milk and broiled
chicken soups and toasted
bread and in 3 days later
found her more comfortable [illegible]
After she had been relieved
I ordered a warm linen rag
to be applied to the vulva
3 or 4 times a day to collect
the Lochia for 3 weeks
after which time the discharge
had ceased. On the 20 [illegible]
[illegible]

Thomas V. [illegible]
Aet 40 years on October
1st attempting to jump on a
Street Car coming from
Pimlico, slipped and fell
under the front wheel, receiv-
ing a compound, comminuted
fracture and dislocation of
the left leg and compound
fracture of the right; that
evening at 8 p.m. was brought
into Hospital in a state of
collapse. The house physician
ordered him 1 grain of Morphia
and a [illegible] quantity of whiskey.
Dr. [illegible] Johnston saw him the
next morning and set his [illegible]

Effusion in the Dura [illegible]
[illegible]
[illegible]
[illegible] Dura Mater attached
to Pia Mater and arachnoid
amount of fluid one Pint
Specimens preserved by Dr.
[illegible] Whitney present Dr.
[illegible] Dr. Hall [illegible]
Chisolm and Dr. [illegible].

Thesis,

by

H. M. Lynde.

Diphtheria.

Baltimore, Md.
February 1876.

To the,

Honorable President and Members of the Faculty of the Maryland University of Medicine.

Sirs;

It has been a time honored custom, for the candidate for the degree of Doctor of Medicine to write out and submit an essay upon some subject of medicine, of his own selection.

Taken up as his time is, with lectures and reading the works of the numerous writers, upon the different branches of the profession, the student can be expected to do little

more than reiterate the theories and experiences of his professors and authors.

With this brief introduction I have the honor to submit the following essay upon the subject of

Diphtheria.

This affection has prevailed in different parts of the world from an early period, and has been known under different names, as, ulcus Egyptiacum vel Syriacum, cynanche maligna, angina maligna, angina gangrenosa, malignant sore throat epidemic croup &c. Until within the last few years it has been little known in this country, and was first described

in this country by Douglas of Boston in 1736.

It was first considered as a distinct disease by Bretonneau in 1826, since which time nearly all medical authorities have recognized and treated it as such. He gave it the name diphtherite (διφθερα; skin, membrane,) from which originated the name diphtheria. Its characteristic feature is a false membrane which is situated upon mucous membrane. The first appearance of diphtheria is in redness of the fauces, and redness and swelling of the tonsils, either one or both. Soon the false membrane makes its appearance, at first thin and semi-transpar-

ant, but as it thickens it becomes whitish or ash colored; it may form in layers from medicines or substances vomited. The patches of membrane show well defined, abrupt margins.

Different cases vary as to the amount and location of the false membrane. The tonsils are sometimes much covered, so much so, as to almost meet, and in other cases they are but slightly affected. The membrane may extend over the fauces, posterior arches, uvula, and form over a portion or the whole of the soft palate, or it may pass upward into the posterior nares, or downwards into the pharynx larynx, trachea, and even

down into the oesophagus, and throughout the entire intestinal tract. It may cover the whole surface of the mucous membrane, or be situated, but is generally found in patches. It is firmly adherent to, and not a fibrinous exudation upon the mucous membrane, in which it differs from the false membrane in "pseudo-membranous" or "true croup". It may be torn off but leaves a raw bleeding surface. If the patient live it will recover or later be thrown off, but whether torn off or exfoliated it may be reproduced a second or third time. In exfoliation of the membrane there is a separation of

a portion of the mucous membrane, leaving an ulcerated surface. In "true croup" there is no loss of substance of the mucous membrane when the false membrane is thrown off. The cervical glands are often affected, and generally in proportion to the amount of the affection in the throat. Diphtheria in the throat is to be distinguished from the pultaceous deposit, which is sufficiently common, especially over the tonsils. This is not in the form of membrane, and cannot be removed in strips, but may be seen to dip into the follicles. Pharyngitis with pultaceous deposit is frequently mistaken for diphtheria. It is

often frequent during epidemics of diphtheria. It may be due to the epidemic influence, but is not very serious. The exudation is also sometimes found upon the anus, vulva, vagina, & prepuce, and upon the cornea, constituting diphtheritic conjunctivitis, which may destroy vision by causing opacity of the cornea. In fact the pseudo-membrane may appear wherever there is mucous membrane, and even upon the skin, when it is abraded, or where there are ulcers.

There are no anatomical characters to this disease, aside from those belonging to the diphtheritic inflammation of the mucous membrane and skin.

Attacks of diphtheria are sometimes

acute commencing with a chill, followed by high febrile movement, but not unfrequently the development of the disease is gradual, and insidious, the patient complaining of indefinite ailments, when upon examination of the throat, the characteristic affection is discovered, without any previous symptoms existing, pointing to the disease. After the development of the disease the symptoms are divided into general and local. The affection of the fauces are seldom painful so that it is liable to be overlooked. In some cases the sensibility is obtuse to be diminished. In others partial paralysis of the muscles of deglutition accompany the attack causing

difficulty in swallowing, especially fluids, which regurgitate through the nostrils. If there is abundance of exudation, which is loose, pharyngeal rales occur. The breath is sometimes fetid, suggesting gangrene of the fauces or lungs, and before and after invasion of the posterior nares there is a discharge which causes irritation & swelling of the upper lip. In other situations upon mucous membrane or skin (which are visable), the diphtheritic inflamation is accompanied with a muco-purulent discharge, more or less abundant, often ichorous and sometimes fetid. The gravity of the attack is in proportion to the local manifestation & the amount of the discharge. The gravity is not de-

product upon the local affection, the latter being simply an expression of the disease, not the cause.

The symptoms of the invasion of the larynx are similar to those of "true croup," viz; cough more or less croupous, (shrill barking) fitfulness of voice, with change of pitch, and stridulous respiration. Respiration may be embarrassed by the swelling of the tonsils or pharynx without an invasion of the larynx, but this invasion may be established so long as the voice remains unaffected.

Aside from the affection of the larynx, which involves much danger, cases are either mild or severe according to amount of constitutional dis-

turbance. In cases are so mild that the patient does not take his bed or appear to feel any great amount of inconvenience from the attack, but in slight the attack at the most often localities are liable to be invaded by the diphtheritic inflammation, increasing its gravity, and important organs may be the result. In cases in which the attack is mild throughout, the exudation is confined to one locality.

The pulse sometimes becomes frequent, and in others is scarcely above the normal standard. It is soft and denotes feebleness of the heart's action. It is sometimes irregular, and if not accompanied by serious organic disease

affection is a grave symptom. Hemorrhage from the nose frequently occurs, and sometimes from the mouth and stomach. Epistaxis is sometimes so profuse as to require mechanical interference to check it; it is of bad omen. Hemorrhage from other localities is to be considered as serious.

The skin rarely shows increase of heat, and in some cases the surface is cool or cold. Petechial spots or echymoses are sometimes seen accompanying hemorrhage, but this is no characteristic eruption. Other eruptions are accidental.

Symptoms referable to respiration are due to the presence of the exudation in the larynx, trachea and

bronchial tubes. In these cases, if life is sufficiently prolonged, portions of the mucous membrane are expectorated. The apetite is generally diminished, and vomiting is a frequent symptom, in consequence of which alimentation is materially interfered with. Diarrhea frequently occurs and is a symptom of bad omen.

Generally the mind is not affected tho' there may be slight, and in a few cases active delirium. Albuminuria is sometimes a complication.

The duration of diphtheria is usually from one to two weeks. Death may take place in this time, or in case of re-

convey the disease may continue for an indefinate period. Complications are rare, tho' it is frequently associated with other diseases; as scarlatina, measels & small pox.

The heart action may be so feeble as to cause death by syncope. Paralysis may be either of the voluntary or involuntary muscles. The most frequent is that of the muscles of the soft palate & pharynx; in this situation it is shown by difficulty of deglutition, and regurgitation of fluids especially into the nose. Paralysis of the soft palate is indicated by the patient talking through the nose. Paralysis occurs also in other situations as the lower extremities, but it is functional and may

be affected to more or less in all cases, in the course of a few weeks or months. In some rare cases the paralysis is general, and affecting some of the involuntary muscles. Connected with the paralysis there is often loss of sensibility. In exceptional cases there is hyperaesthesia. The sense of sight is liable to be affected. Strabismus is one of the regular. Amaurosis when occurring is probably due to uremia. Dyspnoea sometimes follows the disease from paralysis of the intercostal muscles and diaphragm, causing danger from inability to carry on the inspiratory act. More or less impairment of deglutition is common, but paralysis therefrom only occurs in a minority of cases. The sequels of diphtheria may

occur in mild cases.

Diphtheria is evidently a constitutional disease, involving blood changes which are not yet understood. Symptoms indicating constitutional disturbance are to be seen before the diphtheritic inflammation makes its appearance. The latter is therefore evidently the consequence of the former. Only the local affections, bear a relation to the gravity of the disease, but this is only from the fact that they are the local expressions of the disease. Some authors have considered diphtheria as identical with scarlatina, but this is negatived by the fact that an attack of scarlet fever does not prevent an attack of diphtheria in after life, nor does an at-

track of diphtheria beneath its membrane.

Diphtheria is an epidemic, and like other epidemics, has its special causes. The question arises, is this cause a virus or a miasma. Some believe it to be due to the local effect of cryptogamic productions, and that the false membrane may be prevented if the vegetable spores or sporules are removed in time by [illegible]ics, or destroyed by local applications.

Diagnosis. Previous to the inflammation & exudation this disease presents no distinctive traits, until the local manifestations are preceded by general symptoms for periods, longer or shorter. It is not improbable that death sometimes takes place from the overwhelming severity of the disease

were before there are any local diagnostic manifestations of the disease. The diagnosis is sufficiently easy when the local manifestations appear. The principal diagnostic points I have already mentioned. Simple pharyngitis, during the prevalence of an ~~attack~~ epidemic are not to be mistaken for it. The false membrane is an essential diagnostic point. Many cases of sore throat during an epidemic are undoubtedly due to the epidemic influence.

Prognosis. Simple diphtheria is not very dangerous, but when it takes the croupal form it is extremely so, and the malignant form is fatal in a great majority of cases. It is at times insidious

in its progress, especially in children. The patient can not be considered as safe from diphtheritic laryngitis as long as the cause of the disease continues, but the danger is perceptibly diminished after the first week. A fact to be borne in mind in this disease is the liability to sudden and fatal syncope. The paralytic affections which follow diphtheria, do not generally occasion any danger, except when deglutition is very difficult, and when the respiratory muscles are so much involved as to threaten death by dyspnœa.

Treatment. First in those cases in which the larynx is not involved. The indications in these refer to the general condition and to local affection. For local application a

gargle of chlorate or nitrate of potassa may be employed if the patient be not too young nor the act of gargling cause to much annoyance. Ice taken into the mouth in small pieces is sometimes very soothing and agreeable, and if there is fetor a weak solution of chloride of soda may be applied with a camel's hair brush, ~~m. ii to f. ℥ i of mucilage~~, or Iodide of bromine in solution m. ii to mucilage f ℥ i. Carbolic acid & creosote in weak solution are also good antiseptics. Mild astringents are sometimes of advantage; tanic acid combined with glycerine. A solution of hypo-sulphite of soda applied to the patches is sometimes found to be useful and is supposed to be of use from its power of destroying vegitable parasitic productions;

solution of ℥iii of the salt & glycerine ℥ii water ℥vi.

The general condition is not controlled by any known specific remedy. The great object of treatment is to support the system and keep the patient alive until the course of the disease is ended. Sulphate of quinine, tincture of chloride of iron, and chlorate of potassa may be mentioned as being useful, tho' they don't exert a specific influence on the disease. Permanganate of potash, internally, has been advocated by some, and a weak solution is a useful antiseptic application. Much importance is attached to the alcoholic stimulants when used with discretion. The principles governing its employment are the same as in essential fevers, or other diseases tending to destroy life

by asthenia. There is sometimes intolerance of alcoholics. In their use the phasicians should be governed by the indications and by watching closely their effects. Alimentation is most important in this disease; the diet should be highly nutritious, concentrated & containing all of the alimentary principles. Milk is the best. A difficulty sometimes arises from repugnance to food. Owing to the difficulty of alimentation and from not sufficient importance being attached to it, cases of death from innutrition occur.

The antiphlogistic treatment is contra-indicated. Blisters and other counterirrit-ants should not be employed, as they only tend to produce other foci for the diphtheritic inflammation. Symptoms inci-

dental to the disease call for appropriate treatment, as vomiting, diarrhea, hemorrhages, restlessness & vigilance. Where there is diphtheritic laryngitis, measures are required to hasten the loosening of the membrane. The inhalation of warm vapor or steam, and the vapor of lime water, are the most efficient.

The rules for tracheotomy are to operate when the patient will die from suffocation.

When practicable, removal, especially of persons between 2 and 15 years of age, beyond the epidemic prevalence should be advised and insisted upon.

Respectfully submitted
Fred M. Lynde

A Thesis

Written & respectfully submitted

by J. Y. Lewin

Typhoid Fever

[illegible] Continued Fever, [illegible] Fever, Enteric Fever and Abdominal Typhus, are all synonyms of the same disease. The word typhoid signifies typhus like, and is named thus from the resemblance of this disease to Typhus Fever. It is an unfortunate one, inasmuch as it is customary to apply the same name to a condition or state which is incidental to many diseases. Murchison has [illegible] the term "pythogenic fever", a [illegible] dicating the disease to be of [illegible] origin, viz: that of putrescent [illegible]: but as this has not been [illegible]

established, [illegible]

[illegible].

The time occupied in the [illegible] is, as a rule, very [illegible]; the early symptoms are languor, [illegible]ity, anorexia, headache, epistaxis, and a [illegible] chill [illegible]. [illegible] the above symptoms (one of them) [illegible] are almost pathognomonic [illegible] of the [illegible]. [illegible] takes his bed with [illegible] violence, being [illegible], [illegible]; [illegible] delirious [illegible].

In many cases the [illegible]

quently, and there is usually [illegible]
[illegible]
[illegible]
[illegible]
[illegible] appearance [illegible]
[illegible]
[illegible]
[illegible]
tongue is pretty [illegible]
[illegible], and [illegible]
teeth along its sides; [illegible]
[illegible]
[illegible]
[illegible] mucus. Swelling [illegible]
[illegible] usually [illegible]
of the first week, the belly [illegible]

[illegible]

[illegible]-carcal [illegible], — [illegible]

[illegible].

The most important objective symptom is the [illegible]; the temperature [illegible] [illegible] of abdominal [illegible], [illegible] the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] of the next day is about one degree [illegible] than that of the preceding afternoon.

"An attack of disease," [illegible] Hartshorn, "in which on the second day [illegible] [illegible] [illegible] is not typhoid fever, and the same [illegible]

[illegible]

[illegible] the temperature [illegible]; to

[illegible] the end of the second week, [illegible]

the heat below 103° is always favorable,

and persistence at 104°, 105°, or 106°, shows a

[illegible] case" — the higher the heat, the worse;

and a sudden increase [illegible]

[illegible] complicating [illegible].

[illegible] the [illegible]

[illegible] increases to [illegible] beats [illegible]

[illegible]

[illegible] to the temperature [illegible].

The [illegible] pulse [illegible]

disease probably [illegible]

[illegible]

arterial walls [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

urine is albuminurious. [illegible] In

[illegible] matter is increased — Renal [illegible]

[illegible] which [illegible]

[illegible] to the [illegible]

or as a complication.

In the second week, the pain in

the head and limbs ceases, but the [illegible]

[illegible] become [illegible], the patient [illegible]

stupid, inattention greater, the [illegible]

[illegible] the [illegible]

[illegible] becomes cloudy, and the patient

falls into a somewhat stupid state,

which [illegible]

Towards the end of the [illegible]

[illegible]

bed; the muscular activity [illegible]

not entirely lost, is greatly blunted,

and [illegible]

constipated during this stage of the

disease, though there are generally at

this time several [illegible]

daily; & the tongue is covered with a

brownish crust. The [illegible]

ature is usually 104°–106° in the [illegible]

and in the morning the [illegible]

[illegible]; the [illegible]

[illegible] 100 – 120 [illegible] [illegible].

[illegible] the [illegible] the

patient is very weak, subsultus tendi[illegible]

may probably be seen, the stupor or [illegible]

preëxisted reaches a high degree [illegible]

ity, the coating on the tongue becomes

thicker, [illegible]

[illegible]

[illegible], the swelling of the spleen [illegible]

[illegible], the [illegible]

pale as the sudamina increase [illegible]

[illegible]

[illegible],

the morning remissions are [illegible]

and it is during this critical [illegible]

that death is apt to close the scene.—

[illegible]

and consciousness reappears, [illegible]

comes more natural, the tongue
moist and its coating disappears, the
difference between morning and even-
ing temperatures is again marked, the
pulse diminishes in frequency, loses
its dicrotic character and regains
force and strength.

The general improvement still goes
on until the fourth week, though some-
times the patient may pass directly into
convalescence. In other cases, the patient
grows worse and dies of paralysis of the
heart and of suffocation; others still,
in whom there is a ravenous appetite,
through negligence or inattention on
the part of the physician or nurse, or

intracticability on the part of the patient, may take solid food too soon into his bowels, which often causes perforation, and peritonitis is the result.

In some cases the symptoms during the second week do not grow worse, but decrease and disappear probably altogether at the end of the second week, and are called abortive, or modified typhus.

In protracted cases great emaciation and bed sores may supervene, and in during convalescence abscesses in various parts the body may cause trouble, and hemorrhage may also occur from rupture of the capillaries.

The symptoms and course described are those most common to be met with, though many variations exist. Though many of the symptoms be absent or the same modified so as to appear different, yet the disease may be none the less typhoid fever. The disease may not reach its climax during the third week as described in the preceding pages, but at a later date; or the worst symptoms may be entirely absent.

Pathology

Typhoid fever is viewed by most authors to be a general or constitutional disorder with local secondary lesions in the intestines. Some, however, believe the matter absorbed is of a specific nature, and regarding it as the primary affection; and the constitutional disturbance due to septicaemia from absorption of this matter into the system.

Causation

Many theories exist as to the true causative agent. Anything that lowers the tone of the system and thereby diminishes its protective powers against morbid in-

[illegible] to its development, though it attacks the most [illegible] and robust. It has no geographical limits, but is found in all climates and localities. Authors differ greatly as to whether it is contagious and infectious or not, it being so closely allied to typhus in its symptoms that this point is difficult to decide positively. Dr Niemeyer describes it under the head of "Acute Infectious Diseases", while Dr Flint almost if not entirely proves its contagious character. Some authors assert the existence of a peculiar fungoid in water of sewers, which they think

to production of abdominal typhus.

Typhus and Typhoid fevers may exist together as an hybrid disease, and we may thus account for the infection which some authors ascribe to typhoid, but which is more probably due to the typhus. It is most common between childhood and old age, though it may commence at any, and seldom occurs the second time in the same person; but exceptions to this also, exist. It occurs most frequently in Autumn.

Diagnosis

From Remittent fever, Typhoid is distinguished

by the absence of [illegible] of [illegible] and vomiting, its slower onset and more prominent [illegible], and abdominal symptoms. From typhus ([illegible]), by [illegible]sing the following:

In Typhus –

No epistaxis nor bronchitis; bowels constipated, and belly seldom tympanitic; miliary eruption fifth to the seventh day; progress [illegible] slow; death often within ten days; countenance dusky red; contagion mostly obvious; anatomy not peculiar—

In Typhoid –

Epistaxis and bronchitis; diarrhoea, tympanitis, gurgling &c; lenticular

[illegible] & ox; frequency [illegible]; death mainly within fourteen days; coloration usually purplish red; origin obscure; lesions characteristic. The duration of the elevation of the temperature in typhus is rarely longer than eighteen days, while in typhoid it is twenty-one days or more.

In typhoid the evening and morning temperatures vary, the former being almost constantly the higher; while in typhus but little variation in temperature between morning and evening is noticed.

Prognosis

Usually favorable, though the possibility of perforation of the intestines gives uncertainty to every case, even late in convalescence; and should strictly admonish the physician not to be too positive in declaring the patient out of danger.

Sequelae

Slow convalescence, mental faculties [illegible] [illegible] for months afterwards, — paralysis is an occasional sequella, — perforation of the Ileum, abscess, &c, [illegible] under certain circumstances.

Morbid Anatomy

The parts characteristically affected in this disease are the Peyerian or agminated, together with the solitary glands of the small intestines and the mesenteric glands. The glands at first thicken and become elevated and reddened, and sometimes afterward induration, and in some cases softening, and later ulceration, may go on until the deeper structures are involved, and the coats of the intestines are perforated, and the morbid product and contents of the intestines entering into the peritoneal cavity set up peritonitis which is usually indicated by a sharp and [illegible]

pain in that region.

Complications

Pneumonia, Inflammation of the Brain, or Peritonitis.

Treatment

It being a self-limited disease, little or perhaps no medication is called for in un-complicated cases, but good nursing and strict attention to hygienic conditions are of the utmost importance. There is no remedy known to the profession that would abort the disease. Emetics and venesection which were formerly used, are now known to be injurious, and emetics

are not called for unless there be undigested food in the stomach.

Dr Wunderlich thinks calomel has a tendency to cut short the disease if given the first week before the commencement of much diarrhoe — one or two 5 Gr. doses is sufficient, and according to the author mentioned will render the course of the disease milder and shorter, if not actually cut it short. Willebrand regards iodine as a specific, though it has not yet been sufficiently used to state positively as to its effects.

Ventilation, and vapor of water in the room, and regulation of the temperature of room at 60°-65° is worthy of attention.

Liquid and nutritious food as milk, meat broths, eggs, and even stimulants are called for. If the bowels are much constipated, a little castor oil, and afterwards an enema to assist evacuation. When the fever is high and long continued, a little calomel and ipecac is given with the view of favoring the secretions, and Spiritus Mindereri as a diaphoretic. Rich food as eggs should not be used indiscriminately, but in small quantities often repeated, so that it may be assimilated; else the redundance would decompose and act as irritant to the Gastro-intestinal canal. It is also [illegible]

of no good in in the [illegible].

[illegible] and [illegible] [illegible]

are [illegible] useful as stimulants, espe-
cially in severe cases. Quinia (1-2 grs
at a dose in solution with dilute sulphuric ac-
id) is useful to abate fever, and is a val-
uable tonic especially in [illegible].

Cold sponging (on the [illegible] or all
the [illegible]) or cold baths are useful to lower
the temperature — the water should be about
94° at first, and very gradually lowered
while friction is applied to the extrem-
ities of the patient. Ice and cold
water are quite essential in the stage
of a fever when the skin is hot and dry,
but should not be used in the sweating

stage of any fever — but rather warm drink.

[illegible] is [illegible] of warm poultices and warm spts of turpentine; diarrhoea, when it [illegible], may be checked by [illegible] and [illegible], or alum opium and sugar of lead; and when there is great tenseness, laudanum and starch [illegible] are good. Digitalis and Veratrum Viride are used as antipyretics, as they are supposed to control and lessen the action of the heart, and thereby to diminish the rapidity of circulation and fever.

If defervescence does not occur and restlessness is great, the tongue dry and furrowed, and if there be abdominal tender-

... which is indicative of advanced ...
... in Pruss potass, Turpentine, ...
Dr Wood, "acts admirably, and is also
used in Intestinal Hemorrhage". It is
supposed to act in two ways: first by co-
agulating and forming a [illegible] com-
ing with the albumen; and secondly, by
stimulating the capillaries to more
healthy action. It is given in doses
of 10-20 ℳ in emulsion with sugar
or [illegible] twice or four times daily.

Nitrate of silver is said to ...
... the same circumstances.

Attention should be paid to the
bladder and rectum, relieving them
when distended, by catheter ...

[illegible] application; be [illegible]
or bathed with whiskey, camphor and olive oil; and, when ulcers appear, they should be treated accordingly.

The mineral acids are believed by some to be highly useful in the treatment of this disease.

Alcoholic stimuli are often called for, more especially in the latter stages, and should be given in small doses often repeated, and mostly in connection with food as wine-whey and egg nog. Their administration in the [illegible] should be [illegible] careful observation of the effects of very small quantities at first, gradual-

ly increased; i.e. if alcohol increases the unfavorable symptoms, desist at once; but if, on the other hand, the symptoms become more favorable under its use, and the pulse becomes slow and full, we may continue its use cautiously though not in sufficient quantities to narcotize.

It may be used advantageously when sufficient food can not be taken and digested to support the powers of life, which function it will accomplish by lessening the waste of tissue.

The treatment of typhoid fever does not differ essentially fr

that of any other continued fever, and in every case we should treat the symptoms as they arise, and as complications [illegible].

Very Respectfully,
J. Y. Lewin

An

Inaugural Essay

On

Cinchona

To the

Provost Regents

and

Faculty of Physic

of the

University of Maryland

Respectfully Submitted

By

Samuel L. Belt

1876.

Feb. 14th 76.

Cinchona

The bark of different species of Cinchona, of the natural order Cinchonaceæ, found growing in large trees along the course of the Andes Mountains, in the western part of South America, from the tenth degree of north latitude to about the nineteenth degree of south latitude. There are three varieties of Cinchona Bark, recognized by the United States Pharmacopoia, which will be considered in the following order,

Cinchona Flava, Yellow Bark, called in commerce Calisaya Bark, is derived from Cinchona Calisaya,

Cinchona Pallida, Pale Bark,
called in commerce Loxa or
Lima Bark, derived from
Cinchona Condaminea and
Cinchona Micrantha, and
Cinchona Rubra, Red Bark,
derived from Cinchona
Succiruba,

Cinchona, or Peruvian
Bark, as it is generally
known, is gathered by the
natives of South America,
and is quite an article of
Export from some of the
Pacific ports of that country.
It is obtained by stripping,

the trunks and branches
of the Cinchona tree, during
the dry season of the year,
and is dried by exposure
to the Sun, during which
process the smaller pieces
become quilled.

The Calisaya, or
Yellow Bark, comes to the
markets in both quills and
flat pieces, from one or two
inches to a foot in length, and
several inches in diameter, and
of variable thickness and as
its name would imply of a
brownish yellow color, the

Epidermis, does not contain any of the active principle, of the bark, Therefore if it is removed from the inner bark, before it is put up from the market,

The Calisaya Bark, may be distinguished from the other varieties, by its color and its very bitter taste, owing to the presence of a much larger proportion of the alkaloid quinia, one of the principles for which the Cinchona Barks, are so much valued as a medicine,

The Pale Bark, comes

in cylindrical piece of variable lengths, Sometime Singly and Sometimes doubly quilled, from two lines to an inch in diameter, and from half a line to two or three lines in thickness, the best Kinds being about the Size of a goose quill, the exterior Surface is rough and marked with figures and of a grayish color, there are two varieties of the Pale Bark, the Loxa, and the Lima, it has an astringent, and Slightly bitter taste, and contains a larger proportion of

Cinchonia, than either of the other Cinchona, Alkaloide, there may be found also some gum, and tannin, in addition to the other principles, that the Cinchona Barks, contain,

The Red Bark, usually comes in thick and flat pieces, though sometimes it may be seen in quills, from half an inch to two inches, in diameter, they are generally covered with a reddish brown, and rugged Epidermis, beneath which is a dark red brittle, and compact layer, the interior parts

being woody, and fibrous, and of a lively brownish color, with an astringent, and very bitter taste; the Variety of Cinchona Bark, contains less of the quinia than the Calisaya Bark,

Within a few years the cultivation of Several varieties of Cinchona trees, has been Successfully introduced into the Southern parts of India, and it has been found to be equal in value, to the South American, article, The use of Cinchona as a medicine, was introduced by the Jesuits, about the year, 1638.

their attention being directed to it by the Natives of South America, who were in the habit of using it as a remedy in Malarial fever, a disease from which they often suffered, and as the Europeans, who had settled in that country, became liable to contract the disease, and wishing to get relieved, that were willing and tried everything to cure themselves, and among those who were first cured by the use of the Cinchona Bark, was the Countess Cinchon, hence the

name Cinchona Bark, At
that early day, and in the
infancy of its use, it was
administered in the crude
form of powdered substance,
but at the present day we
are enabled by the application
of our chemical knowledge,
to obtain its active
principles, and thereby im-
prove its taste, and at the
same time increase the power
of it as an antiperiodic, in
a much smaller dose, also
get rid of a large quantity
of fibrous and earthy matter

Chemical Constituents

Quinia	Starch
Cinchonia	Fatty Matter
Quinidia	Coloring "
Cinchonidia	Extractive "
Kinic Acid	Liquin
Tannic "	Lime.

The above constitute the rich & substance, that are found in the Red, and Yellow Barks, the Pale Bark contains besides what has already been mentioned a small quantity of Gum

The Alkaloids are of much importance and of these Quinine stands at the head of the list.

it is obtained by treating the
powdered Calisaya Bark, with
boiling water, acidulated with
muriatic acid which decomposes
the Nitrate of quinia, as it
exists in the bark, and forming
a Soluble muriate, the muriatic
Solution of quinia then being
treated with lime, by this
process we decompose the muriate
of quinia, precipitating it in
an amorphous mass, this being
dissolved in boiling Alcohol,
and filtered through animal
charcoal to remove all con-
taminating impurities, then

by distilling off the alcohol we obtain the alkaloid quinia in a state of chemical purity, thereby the use of any of the various acids, the salts of quinia, can be made, of which there are quite a large number used in medicine, among them may be mentioned the Sulphate Muriate Valerianate citrate acetate tannate Phosphate Hydrobromate, and quite a number of double salts, such as the citrate of iron and quinine citrate of Strychnine and quinine, Valerianate of iron and quinine and the Valerianate of Ammonia and quinine

phosphate of iron and quinine and the phosphate of strychnine and quinine. Of all the various salts of quinia, the sulphate is by far the one most generally used, and many thousand ounces are used annually. The valerianate is also of considerable importance as we have in it the antispasmodic action of valerianic acid, and the antiperiodic action of the quinia, and if given in two or three grain doses repeated every hour or two it often relieves a painful and at times an obstinate case of facial neuralgia by acting as a sedative.

Cinchonia the next Alkaloid of Cinchona Bark, is obtained from the mother water remaining after crystallization of the Sulphate of quinia, Being the most Soluble of the Sulphates of the four alkaloids, found in the Cinchona Bark, it remains in Solution after the Sulphate of quinia, and the mixed Sulphates of quinidia, and cinchonidia are crystallized out, It is precipitated from the mother water by a Solution of Soda then dissolved in Strong alcohol and purified by being filtered through animal charcoal, distill off the alcohol, and by

the addition of sulphuric acid, or from the sulphate of cinchonia, which occurs in short oblique prismatic crystals.

Cinchonidia, also obtained from the mother water after the precipitation of the sulphate of quinia, has been highly spoken of lately, and used to some extent as an antiperiodic, and stands in the estimation of many as next to quinia, as an anti-periodic.

Quinidia, the other alkaloid obtained from the Cinchona Bark, is also anti-periodic and tonic in its action,

Chemical Relations and Incompatibilities.

The Alkalies and their carbonates, and the Alkaline Earths precipitate the Alkaloids from the infusion, and decoction of bark, Tannic acid and all astringent substances containing it precipitate insoluble tannates of the alkaloids, By the above mentioned reagents the aqueous preparations of Cinchona bark, have all of the active principles of the Medicine precipitated, Though they may be diffused by agitation through the menstruum

and still be efficient, though not so elegantly to the patients palate,

The same may be said of the precipitates produced by the soluble salts of opalic, tartaric, gallic, and acetic, acids, in consequence of the difficult solubility of the compounds of these acids with the Cinchona Alkaloids, these last precipitates however are soluble in an excess of the acids,

Besides the above mentioned precipitants of the active principles, there are many other agents that are incompatible with

the various fluid preparations
of Cinchona bark, and ought
not to be forgotten when prescribing
these preparations, Among them
may be mentioned the Soluble
salts of lead iron Silver
Zinc Mercury antimony and
Arsenic, also a solution of gelatine,
Some of these do not act on
all of the various kinds of the
Cinchona barks, still it would
be well to avoid combining
them together as there is a doubt
in reference to their being entirely
Soluble, They act upon the
Tannic and Kinic acids, and

the various other principles
found in the bark, Owing
to the large proportion of Citrate
of Lime, the Calisaya bark
contains; Sulphate of Soda,
decomposes the Lime Salt and
precipitate a strong infusion
of this Variety but does not
affect much of the other barks,

But the Virtues of the in-
fusions are not impaired
by the magnet, as the active
principles remain undisturbed
so that the incompatibility has
reference to the substances added
and not to the Cinchona alkaloids,

Effects on the System

As the virtues of Cinchona bark, reside mainly in the Alkaloids, and these are closely analogous in their effects, it will be most convenient to treat of quinia as the best and the one most generally used as well as having the greatest effect upon the System,

Sulphate of quinia is the salt most used and it acts similar to the alkaloid, therefore pretend On account of its purity,

When sulphate of quinia is given to an adult in good health in

half to one grain doses three or four times a day it produces effects very analogous, if not identical with those of the simple bitters, at first the effect is not sensible, but after a short time the appetite increases, the food appears to be more rapidly digested, the pulse becomes fuller and stronger, if not accelerated, nutrition, is promoted, the temperature of the surface elevated slightly, and other vital functions moderately stimulated, In other words we consider its action as above stated as a stimulating tonic,

In irritable states of the organs of digestion or of the system at large the effects are sometimes exalted by the free use of the medicine, into a moderate febrile state, with gastric oppression, thirst, furred tongue accelerated pulse heat and dryness of the surface, and headache or other cephalic uneasiness, This condition may not however be the direct effects of the medicine upon the system, but sympathetic of some local irritation produced by it, in the stomach or other parts of the digestive apparatus, It does not

produces such excitement generally in perfect health, that is more liable to act as a sedative in large doses,

When given in four or five grains at once or ten to fifteen grains in divided doses during the day, quinia has a tendency to act upon the brain and often produces very decided effects upon that organ, the quantity varies in different individuals as to its effects upon the brain,

The first cerebral symptoms are buzzing roaring like that of a strong wind or a cataract, and

lightness about the head in general, and hardness of hearing, the circulation is not much affected, the pulse may at times be a little diminished in frequency, but for the most part unaltered, When given to the amount of from Sixty to Eighty grains during the day the central functions are more disturbed and a decided sedative influence is produced upon the circulation, diminishing the frequency and force of the pulse, proportionate to the amount of salts used.

Along with the abnormal sounds before mentioned, there is now giddiness or dizziness the individual if such often staggers, there is occasionally irregular muscular movements, If the first dose is large there may be flushing of the face headache, and sometimes Epistaxis indicating decided determination of blood to the head, and at times active delirium occurs, This prostration under the use of quinia may be carried so far as to constitute real poisoning, Several cases are on record though the quantity was large,

Mode and Nature of Operation

As quinia possesses the property of a local stimulant we will consider its tonic properties as due to a direct action upon the digestive organs, the gastric and intestinal irritation that is at times caused by the use of it, is probably nothing more than an over action of its tonic influence upon the alimentary mucous membrane, and to the continuance of this condition may be ascribed the febricalous condition of the system at large. that at times attends its action,

That the active principles
of Cinchona bark, entire the
circulation can no longer be
doubted, Experiments have
detected quinia in the blood;
and it may easily be recognized
in the Urine a short time after
it has been administered by a
simple chemical test, A solution
of iodide of potassium in which
free iodine has been dissolved
throws down an orange brown
precipitate from the solution of
a salt of quinia, In ordinary
Urine no such effect is produced,
but, during the use of sulphate

of quinia the application of the reagents will be followed by a precipitate as soon as the system becomes affected by the quinia, and as long as it continues under its influence,

The inferences deducible from these facts are in the first place that Cinchona bark, acts on the System through the medium of the circulation, and secondly that its action is dynamic, that is upon the vital properties of the parts affected, and not through any chemical ~~chang~~ combination with the tissues

which would otherwise retain the alkaloid.

Injurious Effects and their Treatment,

In ordinary doses Quinia is not apt to produce bad effects unless through want of appropriateness to the pathological condition in which it may be prescribed, but when too largely administered, it sometimes causes unpleasant symptoms from congestion or over-excitement of the brain, among which a greater or less degree of deafness is the most common,

Generally this deafness subsides with the other phenomena in a period of time varying from a few hours to two or three days, such as times it persists for a greater length of time, and in rare instances has proved permanent and incurable, Encephalitis may possibly result from the abuse of this Medicine, In all cases of over-excitement of the brain the remedies are leeching cupping behind the ears cold application to the head and a Saline purgative in order to draw the blood from the head and clear

the system of the quinia as far as practicable and if this does not relieve bleeding from the lungs, if the symptoms should be urgent and the pulse permit,

The irritation occasionally produced by quinia in the urinary passages during its Elimination is said in some instances where large doses have been taken to have been aggravated into cystitis and even retention of urine. In very large doses prostration has resulted, and in such cases stimulants should be used, the tincture carbonate of Ammonia and alcohol,

Therapeutic Application

Cinchona bark, of itself or some one of its preparations is calculated to meet several distinct therapeutic indications First as a simple tonic Second as an Antiperiodic or Anti intermittent Third as a Super Sedative, Fourth in reference to its Secondary Sedative properties These may be considered severally but frequently two or more of them are indicated in the same disease First as a simple tonic, the Medicine is employed in small doses repeated several times a

day, In general debility it stands at the head of the list of tonics and in combination with iron is sometimes useful in anaemia when the loss of appetite is the main cause, when debility is produced by profuse suppuration and in scrofulous abscesses; in Erysipelas affecting the subcutaneous tissue and in the last stage of confluent smallpox when the surface is bathed in pus diuresis diarrhoea and copious mucous discharges from the bronchial tubes, In these cases, Huxtams tincture of bark

would be very good or the
sulphate of quinia in Solution.
In typhoid affections and
typhus fever spotted fever and
malignant Scarlatina, Cinchona
preparations are very beneficial.
Diphtheria has been treated
with quinia to considerable
extent of late years and as
it would seem with success.
Cinchona is applicable in all
cases of debility brought on by
most of the Zymotic diseases
and I have no doubt has
been the agent in prolonging
the lives of many who have

born afflicted with some one
those diseases,
Second As an Antiperiodic or
An Intermittent, We have no
other remedy equal to Cinchona
bark, in antiperiodic power,
There is no doubt but that
the peculiar property resides
in the Alkaloids, and that the
full effect can be obtained by
the use of quinia, In all
Irregularly intermitting or periodic
diseases quinia may be con-
sidered as an almost certain
remedy, at least it is looked
upon as such by many,

Third as a Suppressant.

By this we mean to imply that a Medicine so named has the power of insinuating an action of its own in any part or organ, to displace disease previously existing in that part or organ, or to exclude it if not already established, The fact that Quinia acts upon the cerebral centres is well known, and the probable influence of such an impression in preventing regular periodical paroxysms has a claim upon our attention, As Chorea functional epilepsy hysteria and Asthma have been treated with some

Sweep by the use of quinia

Fourth Use a Sedative,

The sedative effect of quinia is a secondary action produced by large doses, being always preceded by a period of excitement in certain of the cerebral centres, and perhaps dependent to some extent on the previous excitement, Reference to this sedative property of quinia is invoked here to be applicable generally to diseases of over excitement not connected with active congestion, inflammation or peculiar excitability of the brain,

The intermittent and remittent
fevers and periodical Neuralgia,
pains about the head in general
are in many instances controled
and at times permanently cured
by treatment with some one of the
preparations of Cinchona,
Rheumatism and gout when
of a nervous form can be at
times cured by the use of quinia,
Prof Donaldson considers the
use of quinia in pneumonia,
of the greatest importance claiming
it first among the medicines
to be administered for that disease
given in ten to thirty grain doses,

three or four times a day. The medicine in this case would act as a sedative and in this way it would have a tendency to lower the temperature of the body arrest inflamation and thereby favor resolution, which if aided by proper alimentation may bring about a prompt recovery. The approved treatment of intermittent fever consists as Prof McClellan says in first clearing out the alimentary canal if needed by the administration of a cathartic and if the liver should be torpid give five or ten grains of Mass Hydrarg, or Hydrarg Sub Mur, then give quinia in five or six

grain doses until twenty or thirty grains have been administered between the paroxysms,

As a sedative quinia would be useful in remittent, miasmatic typhoid typhus. Spotted and yellow fever, its action in these cases would be to lower the temperature of the body and in this way control the fever, which at times is very great,

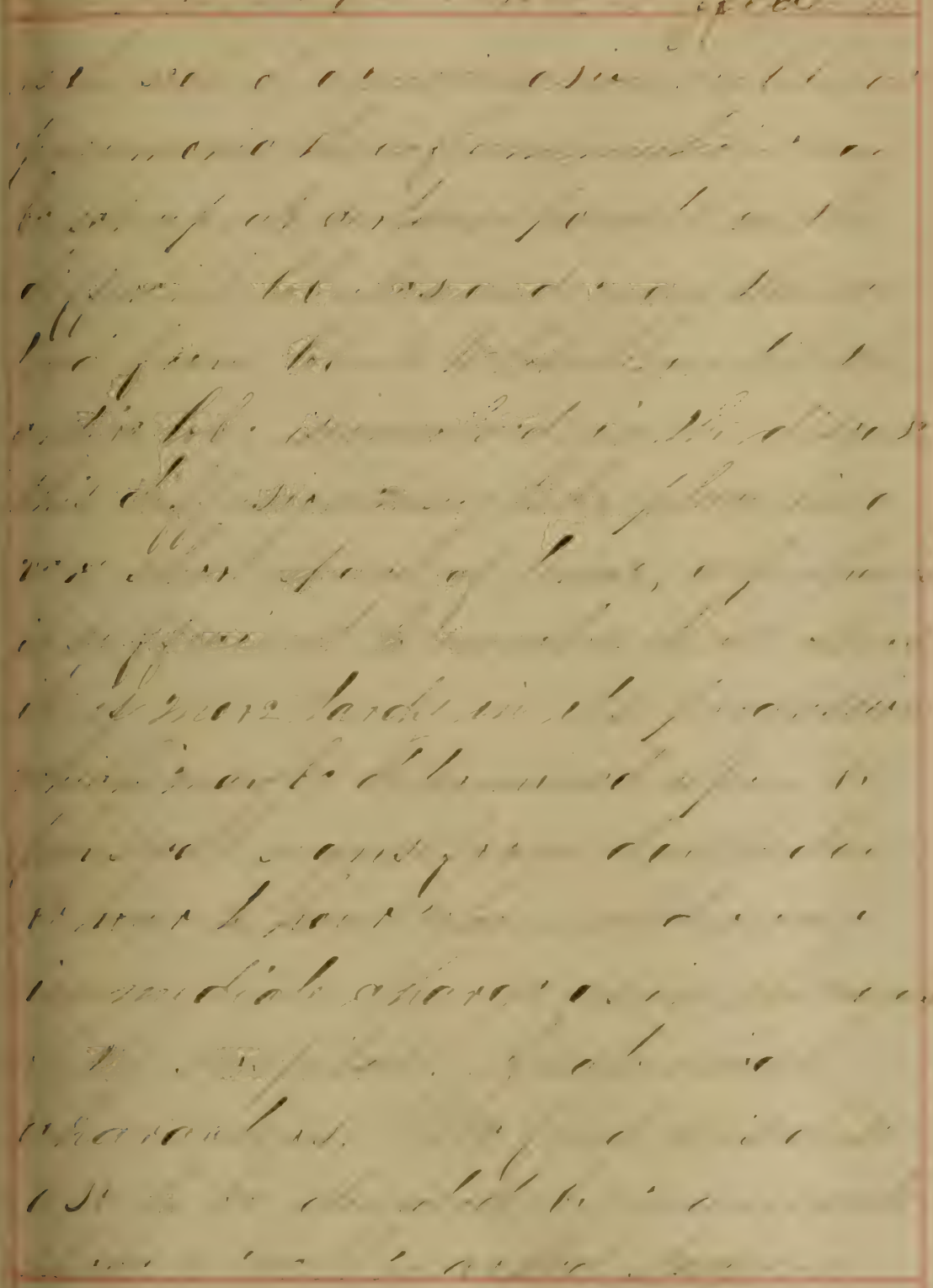
Preparations and Modes of Administration

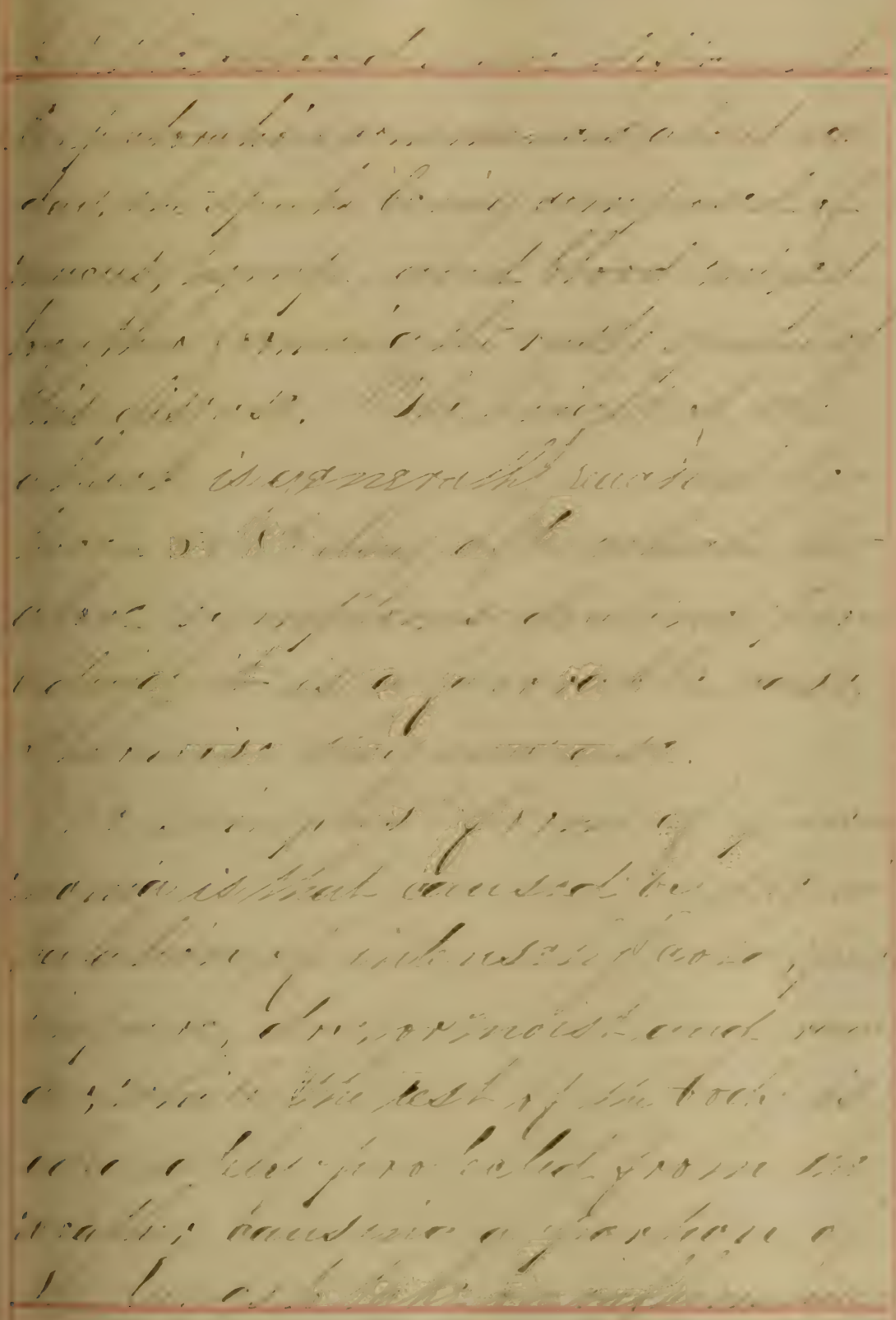
Quinchon, may be given in powder tinctures fluid and solid extracts, or any one

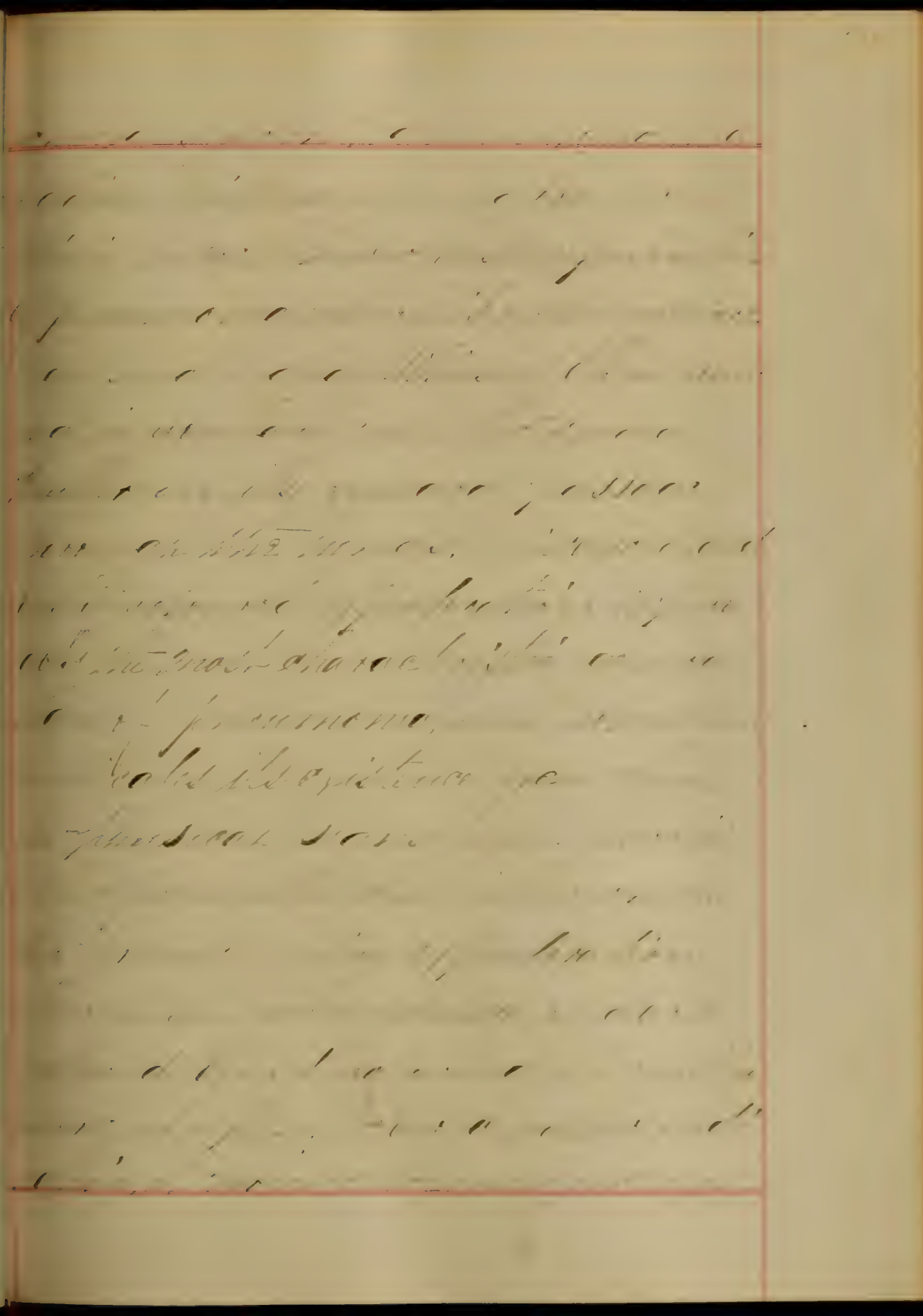
of its alkaloids may be given in solution, pill or powder form, it may also be used hypodermically, and by enema. The following preparations are directed in the United States Pharmacopoeia,

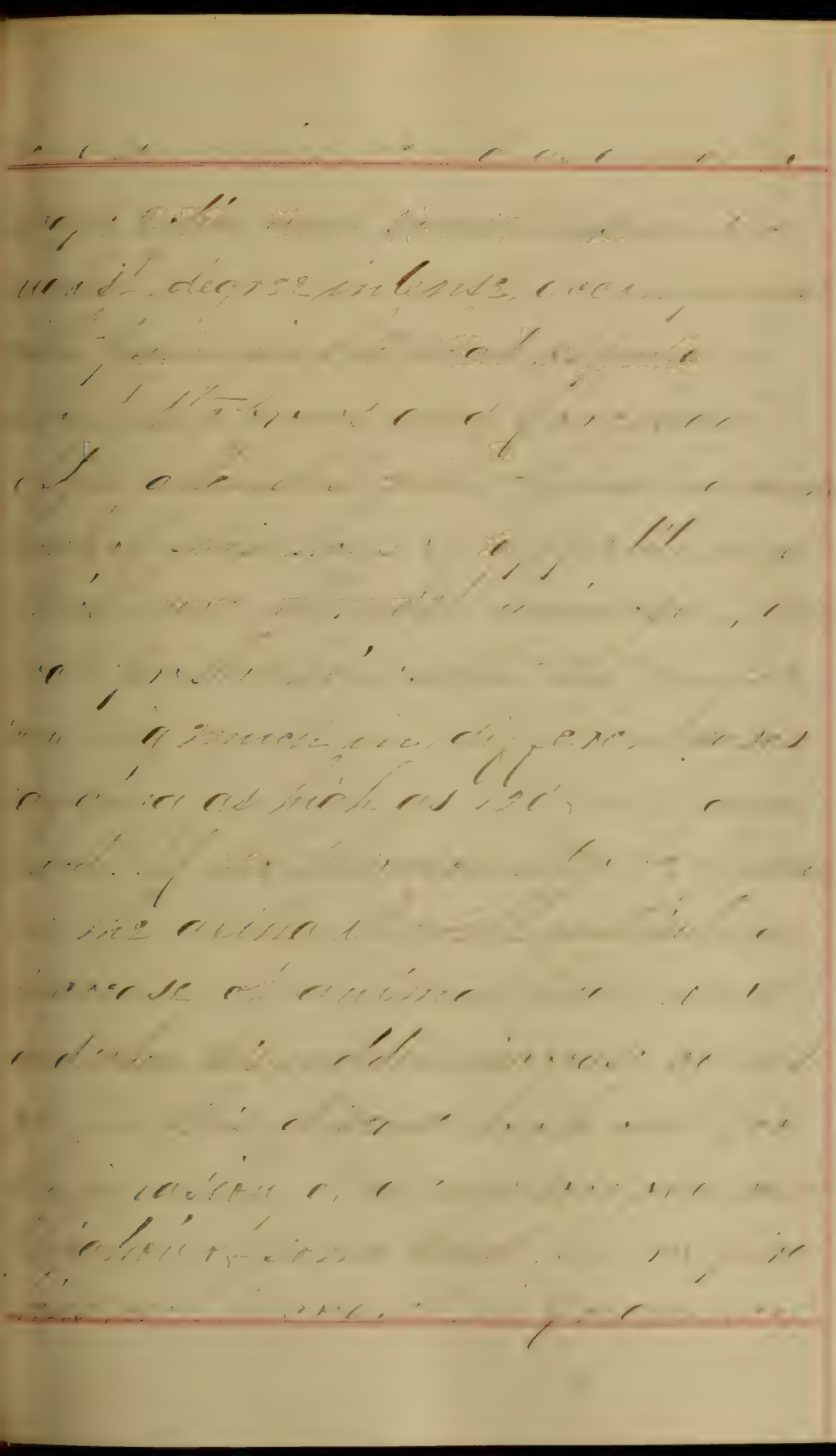
Infusum Cinchona Flava
" " Rubra
Decoctum " Flava
" " Rubra
Tinctura Cinchona
" Cinchona Compositum
Extractum Cinchona Solidum
" " Fluidum
Quinia Sulphas
Cinchonia " ;

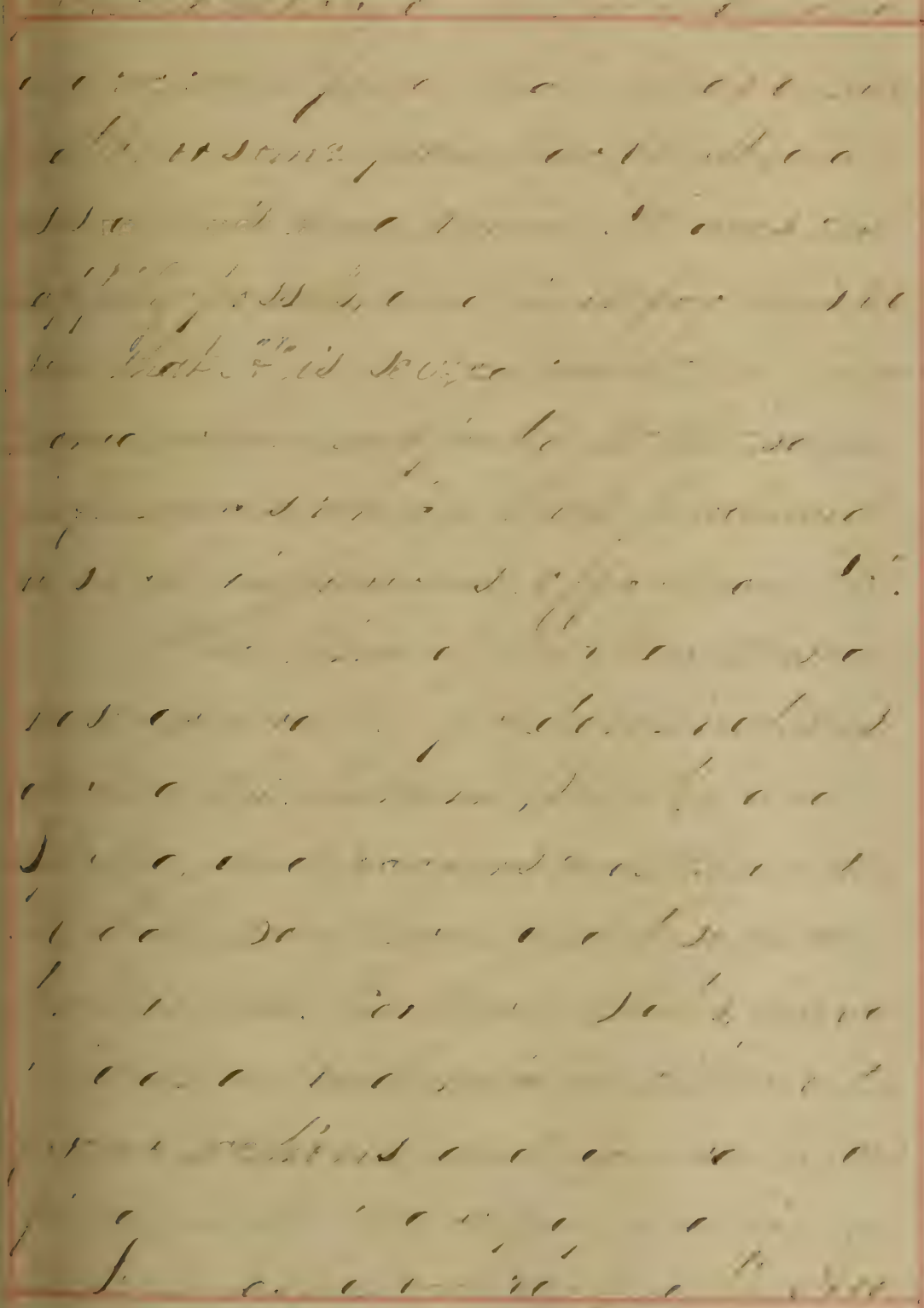
The alkaloids and their salts are by far the most important as well as the most Elegant of the Cinchona preparations and are more often used in the administration of the medicine than any of the others, perhaps as often as all the rest combined, Next in importance are the two (2) tinctures, of these the compound or Huxhams tincture as it is often designated is the best and is used to considerable extent when the effects of the bark and the alcohol as a stimulant are desired at the same time,











A Dissertation
on
Scarlet Fever
by
P. H. Latham

February 14th.
1876 –

Scarlet Fever is an epidemic and contagious complaint, characterized by a Scarlet rash, excessive heat of skin, frequent pulse and sore throat.

The forms of the disease generally enumerated are three, viz: Scarlatina simplex, Scarlatina anginosa and Scarlatina maligna. The division of scarlet fever is a faulty and incorrect one since the disease in all its degrees of severity and apparent difference is but one and the same distinct fever produced by

of cases from four to seven
days. There was decrease of
fever on the appearance of the
eruption. Temperature from
102° to 104°. Skin is hot and dry,
pulse high, generally from 100
to 120. Respiration is generally
easy and not at the [illegible] [illegible]
the fever be very high it be-
comes quickened.

Auscultation and percussion
signs are normal unless there
be some complication. The
voice is not often altered be-
yond that of a nasal sound
so long as the disease con-

frequently in this stage.
The proportion of mild to malignant cases is as four to one. The most malignant case may be produced from the mildest and the mildest from the most malignant. Cause lies in the constitution. In malignant case the onset is sudden of the most [illegible] character, child passing in a few hours from a state of apparent health to one of [illegible] danger. It generally begins with violent fever, pulse very rap-

ed. often so frequent that it is almost impossible to count them. Skin dry & burning. nervous phenomena appear severe, [illegible] becoming heavy and stupid. Even convulsions follow and death may take place in a few hours. [illegible] and hemorrhages are of frequent occurrence in these cases.

The eruption appears generally in less than 24 hours, though it may not make its appearance for several days. The color of the eruption in these cases [illegible]

Thesis

for J. L. Noble

Respectfully submitted

to the Faculty of the

University of Michigan

Oct. 11th 1876.

Opium

Opium from the Greek word mean-
ing poppy juice, ranks first on the
list of narcotics and is the
most valuable article of the
materia medica; remember that
the excellent English physician
and author, Sydenham, is credit-
ed that "Without it the healing
art would cease to exist and
by its help a skillful physician
is enabled to perform cures
that seem almost miraculous".

Opium is the concrete juice of
the unripe capsules of Papaver
somniferum. The Opium Poppy
is a native of Persia, but is

Cultivated in various parts of
Asia and the United States.
It is an annual plant with
a round leafy stem from
two to five feet in height
and large [illegible] pointed le-
aves. There are two varieties
the white and black poppy.
Opium was known to Hippo-
crates and Galen as a narcotic
but its virtues were not known
as might be supposed from
the significance of the name.
The first one to record it
[illegible] was [illegible]
[illegible] in the latter [illegible]

the first century of the Christian era. He says: "[illegible] allays pain, induces sleep, promotes menstruation and is useful in chronic cases." But it was not extensively used until physicians of the Arabian School promulgated a knowledge of its valuable qualities. The most glowing and comprehensive account of which is given by Avicenna who flourished at the commencement of the eleventh century. Under the influence of Galen who was

deemed it as being cold
it fell into disrepute and
was not again received into
the confidence of European
practitioners until the sixteenth
century when Paracelsus and
his followers revived its
use. From this time forward
its reputation increased &
was known by the laudanum
of Sydenham who introduced
it to the epidemic dysentery
of 1669-72, acknowledged it
to be "the chief medicine".
Narcotine, morphia and codeia
the alkaloid bases upon

which the crude vegetable product depends, was discovered respectively by Derosne in 1803, — Serturner 1816, and Robiquet in 1833.

The effect of Opium upon animals differs very materially from that upon man, the influence of which varies with the cerebral development of the animal. The invertebrate exhibit debility of the contractile tissues while the vertebrate below the rank of man are chiefly affected with convulsions, but birds alone are stupified.

except on occasional poisoning
the poppy is a favorite food
of the rabbit, and it also
bears a considerable quantity
of the drug when taken into
the stomach, as well as the
dog and horse, but is not
ill narcotized when it is
injected hypodermically.
In the former case the general
supposition is that the opium
or morphia is destroyed by
digestion. On man the effect
varies with the amount admin-
istered. Some possess an idio-
syncrasy and opium and its

sult act differently upon them so no established rule can be laid down for its use in a given case. In small doses, as from a quarter of a grain to one grain, opium produces upon those who are accustomed to its use, a soothing and luxurious calm of mind and body, followed by a disposition to sleep, which gradually steals over the senses and at last wraps the mind in unconsciousness or, if sleep does not take place, there is a sense of

the body undisturbed by
pain or outward annoyance
and a cloud of dreamy and
pleasing thought suspends
the field of imagination.
In larger doses from one to
three grains of Opium, the
effects produced are much
more striking; the excitement
is greater, the head feels
full and hot, and sometimes
tinkling, ringing in the ears, the
face and eyes are injected
and the pupil particularly
contracted. Though beyond
the stage of excitement it

is usually one of irritation—a crisis and is of short duration. The pulse may fall below the normal standard and consciousness is soon lost in sleep. The secretions are diminished, except the transpiration which is heightened; the mouth and throat become dry with thirst, mucous evacuations is lessened, and in some persons nausea and vomiting are produced. Occasionally itching and miliary eruptions of the skin occur.

In poisons does the stom-

of excitement is absent, a general giddiness and stupor comes on with diminution or drowsiness, though yet fullness of the pulse, followed by a strong tendency to sleep and finally coma. The breathing is heavy and stertorous, the pulse slow and oppressed, and the pupils are contracted. If relief is not afforded the pulse sinks, the muscular system becomes relaxed and death ensues preceded sometimes in children by violent convulsions.

In case of poisoning the stomach pump is generally resorted to, and if this be impossible emetics should be given in double doses, owing to the torpor of the stomach. The direct emetics are generally preferred as the Sulphate of Zinc 20 to 30 grains or the Sulphate of Copper 5 to 10 grains. A tablespoonful of mustard, alum or powdered alum will answer the same purpose. The patient should if possible be aroused from his stupor he should be kept awake and made to walk a long space.

Cold affusions, counter-irritation to the nape of the neck and extremities. Flagellation to the palms of the hands and soles of the feet and when there is well marked the magnetic battery should be resorted to. Artificial respiration should also be practiced. There is no chemical ~~antidote~~ but several physiological antidotes are highly recommended. Strong Coffee has proven efficacious. Belladonna is an invaluable remedy administered either by the stomach or hypodermically.

Stimuli should also be given to support the system. Opium is said to produce sleep by its action on the vaso-motor nerves producing a contraction in the cerebral arteries, and in poisoning its action is directed mainly to the nervous system, no lesions being found after death. It is habitually used as a narcotic in Eastern Countries and to some extent in Europe and the United States, but the effect of such indulgence is very destructive

to both mental and physical faculties, Thomas De Quincy in his work entitled "Confessions of an English Opium Eater" has graphically portrayed the sensations he realized in its use, which has doubtless been the means of drawing others into this baneful vice, through curiosity. His later experience in its use is however sufficient to cause any one to abhor and avoid such a practice. He says:—"The condition which it induces the Opium Eater will

find in the end most oppres-
sive and tormenting, from the
sense of incapacity and fee-
bleness; from the direct embar-
rassments incident to the neglect
or procrastination of each
day's appropriate labor; and
from the remorse which must
often exasperate the sting of
these evils, to a conscientious
mind. The opium eater loses
none of his moral sensibil-
ities or aspirations. He wishes
and longs as earnestly as ever
to realize what he believes
possible, and feels to be

exacted by duty; that the intellectual apprehension of what is possible, infinitely outruns his power, not of execution only, but even of purposing or willing. He lies under a weighty weight of incubus and night-mare; he lies in sight of all he would fain perform, just as a man forcibly confined to his bed by the mortal languor of paralysis, who is compelled to witness outrage or injury to some object of his tenderest love

He would lay down his life if he might but rise and walk, but he is powerless as an infant, and cannot so much as make an effort to move. I had not the power for the weight of twenty Atlantics was upon me or the oppression of inexpiable guilt. Deeper than ever plummet sounded, I lay inactive. Then like a chorus the passion deepened. Some greater interest was at stake, some mightier cause than ever yet the sword had pleaded or trumpet had proclaimed

Then came sudden alarms:
hurrying to and fro, trepidations
of innumerable fugitives: I knew
not whether from the good cause
or the bad: darkness and lights,
tempests and human faces; and
last with the sense that all was
lost, female forms, and the fea-
tures that were worth all the
world to me; and but a moment
allowed—and clasped hands,
with heart-breaking partings,
and then—<u>everlasting farewells</u>!
and with a sigh such as the
caves of hell sighed when the
incestuous mother uttered the

abhorred name of Death, the sound was reverberated — Everlasting farwells! and again and yet again reverberated — Everlasting farwells! And I awoke in struggles and cried aloud, I will sleep no more." After a long and painful effort he threw off the fetters that bound him and his health was restored.

Medicinal Uses. —

Of all the articles of the materia medica, Opium enjoys the widest range of therapeutic application.

From its properties of allaying pain and inducing sleep, it is useful in almost all diseases and is contraindicated only when there is a tendency to apoplexy, coma, or an inflammatory. It has proven a most valuable anodyne in painful and malignant ulcers, and severe injuries, and in soothing surgical shock, as a substitute for Opium. It is also an efficient remedy in colic and spasms of the stomach, bowels, biliary ducts, ureters, neck of the bladder &c.

It never was the leading remedy in tetanus, but chemistry with its daily revelations is supplanting it in many cases with more efficient remedies. In tetanus during the war it was mainly used and out of 363 cases thus treated, 336 ended fatally. Under the use of Hydrate of Chloral, the bromides and Calabar bean much better results are reached.

In Cholera and dysentery Opium is the basis of every form of treatment; partly for its diaphoretic effect, but mainly

for its action in arresting
both the secretions and peris-
taltic action of the intestinal
canal. For the relief of cases
of pulmonary affections, Opium
has no equal. In cerebro-spinal
meningitis and puerperal fever
it proves more beneficial
than any other remedy. In
gastric irritability, to check
vomiting in colica pictonum
peritonitis, rheumatism and
neuralgia, typhus, gangrene, con-
vulsive diseases, diabetes &c. it
is also employed with much
success.

Administration.
The usual dose
as hypnotic and anodyne is
one grain, but in many diseases
larger doses are required and
when the system is accustomed
to its use the dose must be
gradually increased. It should
however be given to infants and
old persons with great care.
It is administered in the form
of powder or pills, sometimes hy-
podermically, and is sprinkled
on irritable ulcers, also in
the form of suppositories.
Various forms are official

All of which proves an important trust in the art of curing disease and allaying the suffering of mankind.

Thesis on,
Acute Articular
Rheumatism.
by
G. B. Becker.
'76

Acute Articular Rheumatism

"The term Rheumatism is used to denote a constitutional disease which is characterized by certain local manifestations, seated in the articulations, and fibrous tissues of other parts" As regards the nature of this disease this is nothing as yet definite, various opinions from time to time entertained regarding the nature of this disease, In former times it was supposed to be of miasmatic origin, but the more recent inquiries into the nature of rheumatism

shows that it acknowledges no general external source, and even at this late day we find no positive demonstration that any definite offending matter or poison precedes the system, However by repeated experiments and instructive reasoning we are led to believe that some morbid material is generated within the bodies of those in whom rheumatism is fully developed, and not absorbed from without, as was supposed by many in former times.

The repeated observations of experienced pathologists such as Rhomel, Todd and others, tend to show —— that the internal inflammation in rheumatism like other inflamatory diseases are referable to an alteration of the animal fluids especially the blood. The phenomena in this disease point to a morbid material in the blood itself, as an explanation of the exudation. The most constant morbid condition of the blood in rheumatism

is the abnormal relative proportion which becomes developed between the fibrin and saline elements.

In normal blood the relative proportion of fibrin to the saline elements is from two to three parts in a thousand, while we have in this disease a marked increase of fibrin ranging from seven to seven ten parts in a thousand.

To further show the disease to be of constitutional origin, for example victims of rheumatism

are apt to offer common symptoms clearly denoting at an early period of life certain functional derangements which lead to impairment of general health - and these rheumatic patients are sensitive to atmospheric vicissitudes, and prone to perspire, the perspiration being of a sour and disagreeable odor, while their urine though usually clear when passed not unfrequently deposits on cooling a red or brick

dust like sediment of lithates, and lactates. The heart of such persons is irritable and prone to take an inflammatory action, so its nutrition is apt to become perverted. The long continuance and frequent recurrence of symptoms or paroxysms of the disease, also point to a constitutional origin of the meteres morbi of rheumatism.

The theory now generally adopted is the accumulation of lactic acid.

in the blood. The first to suggest this was Dr. Prout who believed all the phenomena of rheumatism to be referable to the presence and of this, developed to abundantly in the system, Dr Prout has many able pathologists to support his suggestion. The accumulation of this acid in the blood can very reasonably be accounted for in this way. That before the stench of the food can be applied to the maintenance

of animal heat it has to be converted into lactic acid, which then combines with oxygen to form carbonic acid and water. So we see very readily that whatever tends to interfere with this normal series of changes from taking place may lead to the accumulation of lactic acid in the system. Some believe the poison in rheumatism to be identical with some natural excretion of the skin

as for example when the skin action is interfered with, / especially do we see this in the old / pain and stiffness of a rheumatic character is generally the consequence. The means which nature adopts to relieve rheumatic / forms, seems to suggest a relationship between rheumatism and cutaneous secretion. I have seen persons attacked by this disease, and no sooner had the affection become manifest than

an excessive precipitation
set up as if with the view
of getting rid of some per-
cent matter within.

Having considered
these different views on
the subject, we can not help
believing that some nox-
ious material is present
in the blood, And the
theory which is universally
adopted is that suggested
by Dr Prout, which is the
accumulation of lactic
acid in the blood

Acute Artic. Rheumatism
involves an affection of Arti. or joints

The local symptoms which accompany the inflammation of the articulations are pain, heat, redness and tumefaction. The pain is generally acute and severe, although in a few cases it is latent - that is, the patient is at ease, unless the joint or limb be moved. It has many degrees of intensity, being in a few instances trifling, but more frequently atrocious and agonizing! and, though generally constant, it is sometimes intermittent

In all cases in which it exists it is greatly augmented by pressure, so that the slightest touch - even the weight of the bed-clothes is insupportable; it usually somewhat remits during the day, and becomes severer at night. The heat of the inflamed part is constantly increased, the thermometer placed in the axilla indicates a temperature of 100° to 105° Fahr. or even more, Redness though not universally present. Is nevertheless the rule

and the affected joint is surrounded by a rose-colored blush evanescent on the slightest pressure, yet returning on its removal. The tumefaction of the part is generally so considerable that the shape of the hand, the ankle, or other joints, is completely destroyed. In affections of the knee the patella is often more or less displaced by effusion into the cavity of the joint; The surrounding skin becomes dry, tense, and shining - so much

so, indeed, that experience alone enables us to predict that suppuration will not take place. As regards the heat, a very remarkable fact in rheumatism is, the fever and constitutional distress are not always commensurate with the extent of the local manifestations. The inflammation of the joints is often preceded by febril movement, the fever running so high before any local manifestations that even the most experienced and intelligent

practitioners may be led astray regarding the nature of the impending attack. Moreover it does not follow that patients attack in this way that the intensity of the disease is increased when the local symptoms become apparent, but rather the reverse, they are relieved, the pulse becoming calmer, the countenance less anxious and the suffering seems much relieved. In some cases the fever and local manifestations are simultaneous in their

occurance. while in others the local pain and soreness of the joints preceed the development of the disease for a variable period. Profuse perspiration of a sour or disagreeable odor occuring usually at night is an prominent symptom but it does not tend to alleviate the disease The urine is diminished in quantity, its specific gravity is higher owing to increase of urea and decrease of water. The chlorides are deficient

and occasionally it is slightly albuminous
The appetite is impaired and often entirely lost
Thirst is more or less urgent
The tongue furred, and the saliva acid. The bowels constipated. The strength is preserved, Unless from vigilance on part of the patient may bring about a great deal of discomfort this in connection with the copious perspiration at night, prevents the patient from sleep and thereby brings on general

prostration, such I have described as the general and local expressions of this acute affection and at the maximum of the disorder it would be difficult to imagine a more complete picture of helplessness and suffering than that to which the patient is reduced. Imagine a strong and powerful man, unused to disease, lies on his back motionless, unable to raise his hand to wipe the drops which flow

flash from his brow in
the paroxysms of pain
indeed, he is so helpless
that he is not always sub-
ject to be fed, but to be
assisted at every operation
of nature. The sweat in which
he lies drenched seems
to bring him no relief;
his position admits of
no change; if he sleeps,
his sleep is short, and
he wakes up with an ex-
acerbation of suffering
which renders him fretful
impatient, and discontent
with all around him,

Complications and Sequelae

Before going further it is well to speak of some of the serious complications with which we have to encounter in treating this disease.

A great feature of acute articular Rheumatism is its tendency to invade certain structures of the heart. As a general thing the inflammation is limited to the membrane lining the left cavity of the organ more especially. That portion entering into the formation of the Mitral valve.

In a great many cases of valvular lesions of the heart, this point of difference being rheumatic endocarditis, we may have pericarditis occuring, but this is less frequent than endocarditis as a general thing when we have pericarditis becoming developed Endocarditis coexists.

Rheumatic Endocarditis and Pericarditis, differ from Rheumatic Arthritis. Here we have all the ordinary results of inflammation, which are.

exudation of lymph for-
mation of false membrane
and frequently suppuration
These results being extremely
rare in articular manifes-
tations, These structures are
involved in proportion
to the severities of the Rheu-
matism. They are liable to
become involved at any
time in the course of the
disease, But the greatest liab-
ility is in the early and
middle periods,
There are other complications
which occur so rarely that
they may be regarded as

accidental. The symtoms denoting cardiac mischief are pain and soreness all over the chest, being increased by pressure between the intercostal spaces, and also on taking a deep, inspiration. The patient is restless, his countenance anxious and occasionally haggish. On applying the stethescope to the chest a murmur may be heard, loud, and permanent. If the inflammation be diffuse we shall have a crackling sound like that of new leather, the part being dry.

If serum be effused, we shall have or find the heart moving in a larger space than usual again if lymph be found out, we have a rubbing sound and lastly if pus be present it will be determined not only by the feeler space in which the heart moves, but by the accident collapse and rapid sinking of the patient. If this complication be seen and neglected the patient may die in a few days, but under proper treatment, it seldom continues beyond a week. If it is neglected, and the

patient survive the attack
the pericardial surfaces
become adherent or the
valves of the heart become
diseased and the sequel
of this is dropsie, asthma,
or affections of the lungs
which baffle all the re-
sources of our art. and
really they are to be classed
among the most fatal
maladies incident to
the human race.

Causation

Patients affected with
this disease are apt to
refer the attack to some

special exposure to cold
this being the popular notion among many. that
rheumatism proceeds from
this cause, This however has
but little support. How
often do we see persons
who have been exposed to
cold. who are not troubled
with the disease at all.
although we are not to
exclude this agency, in
toto, for it may and no
doubt does act as an
exciting cause.
In many cases then seems
to be a special predispo-

sition, or in other words the disease involves a Rheumatic diathesis - which may be either congenital, inherited or probably it may be acquired. This may probably account for the proneness of the disease in some, as is shown by the occurrence of it in early life and by its recurrence in those once attacked by it. Age seems to have some influence. It rarely occurs under five years of age. The liability seems

to be between the ages of
fifteen and thirty years.
If the person does not experience an attack before the age last named, the liability diminishes afterwards, and becomes quite small after fifty years. Males are more frequently attack than females, though the difference is not great.
As regards climate the disease prevails most in changeable climates, and therefore frequently met with here, and in

all climates within the temperate zones. but comparatively rare in tropical and extremely cold climates. The specific cause is the accumulation of lactic acid in the blood this being the opinion of all or nearly all the leading pathologists of the day. we therefore can not doubt it.

Duration

The duration of this disease varies greatly. In mild cases without complications it is of short duration

A peculiarity of rheumatism is, it does not pursue a steady continuous march from beginning to end, but its course being marked by notable fluctuations as regards the general and local symptoms we find after a few days the affected joints are nearly free from pain soreness &c. the febril movement subsides and convalescence appears to be near at hand, when suddenly, the local manifestations

and fever are renewed with perhaps as much or even more intensity than before. This may occur repeatedly during the course of the disease. Though by observations made by many, it would appear that the minimum and maximum of duration is from seven to twenty one days, and the average fifteen days. It varies so much that we can not state any definite time as the end,

Diagnosis, This requires but brief consideration The disease with which it is most likely to be confounded with is Gout, and often requires close observation to make a correct distinction between the two. Pleuritic pains, neuralgic affections, and indeed nearly every slight pain the patient is apt to refer to rheumatism. Where we ar physicians and to exclude, by the characteristic symptoms of this disease We

Prognosis

In mild cases without complications the disease is generally favourable. When death does take place during the severer of the disease it is due to cardiac complications, but even in these cases it does not always end fatal, if death does not occur it is serious in consequence of endocarditis which may lay the foundation of grave lesions of the heart which may

become manifest in
after years.

Treatment.

There is scarcely any dis-
ease within the limits
of practice of medicine,
which has undergone
more change in the last
few years, as regards the treatment than
disease under consider-
ation. We find among
the remedies employed
to alleviate the sufferings of those who were attack
by this annoying and pain-
ful disease, were bleed-
letting both general and

local without regard to the condition of the patient, next mercury was pushed to mercurialization and colchicum carried to the extent of producing vomiting and purging But in view of the pathology of the disease this mode of treatment is laid aside to a certain extent and in view of the theory now in vogue, that of excessive acid in the blood, the more rational treatment would be something to counteract this acid,

which would be that of an alkaline character and to fulfil this purpose I would give the bicarbonate of potassa or bicarbonate of soda and Rochelle salt in larger doses & repeated frequently, until the urine exhibited an alkaline reaction, to render these remedies more grateful to the stomach, add a little citric acid or lemon juice directing the patient to take it during the state of effervescence, giving

this way it is generally well borne, and as a general thing the urine is rendered alkaline in twenty four hours. When the pain is so severe as to prevent the patient from sleeping at the usual hours give a opiate- the best preparation to meet this is Majendie sol. given hypodermically. or give Dovers powder at bedtime either will answer, but I prefer the former on account of its quick action, and is less liable to constipate.

When we desire a greater diuresis action than that already produced give the bicarbonate of potassa or acetate of ammonia. or Colchicum in small doses. This treatment does not preclude other therapeutic measures. If the patient be plethoric and fever high bleeding may be beneficial it tends to reduce the temperature and lessen circulation. Tr. of aconite is useful, it appears to have the power of controlling the heart. Continual purgation is never indicated, it conflicts with alkaline

treatment, stimulants should be given freely. Of late years lemon juice has been largely employed in this disease with good results. The vital powers should be supported, for this give tonics and wholesome and nutritious food to the capacity of the digestive powers. The local treatment will consist of cloths saturated in an alkaline opiate solution, the soap liniment is often found beneficial. I think a better

preparation is that made of Gum Camphor Chloroform aconite & olive oil. I have tried this and know by experience that it gives marked relief. The patient should be kept quiet and well clothed and protected from the vicissitudes of the weather. If heart complications occur they should be treated on general principals &c.

[illegible]

Inaugural Dissertation
on
Asthma

Submitted to the examination
of the
Provost, Trustees, and Medical Faculty
of the
University of Maryland.

For the Degree
of
Doctor of Medicine

By
John, W. Smith, [illegible].
of Indiana

Feb. [illegible]

Lecture

same result, viz; discontinuing the disease. In Catarrh the patient is in a slightly negative condition, compared with the atmosphere, in consequence of which the fluids, congest in the mucous membrane; the dry catarrh is in a condition too positive, by which electrical radiation, and the movement of the fluids to the surface is to excessive, the two forms are consequently antipodal, and what which is congenial to one is foreign to the other. A damp and negative, electrical atmosphere, you, are troubled with humid, catarrhal

asthma, augments the severity of this complaint, while one having with the dry form finds his quite less troublesome if not entirely, while in damp, rainy weather & in a climate generally humid. On the contrary one afflicted with humid or catarrhal asthma is seldom ill in dry weather or in a bracing atmosphere, and removal to a climate peculiarly dry often effects a cure. Premonitory symptoms often are great drowsiness, uneasiness, headache, flatulence. Dyspnoea is the characteristic symptom. The sufferer sits or stands up

leaning forward, and laborious breath, the chest is expanded to its utmost, by the accessory as well as principal inspiratory muscles. The countenance is anxious, with pallor coldness, and in severe cases lividness, of the face and hands. Perspiration is often copious. A Wheezing sound accompanies respiration; giving way finally, with relief, upon the expectoration of mucus, usually rather thick, and in pellets. The attack may pass over in a few minutes or may last for hours, or with some remission, days or weeks. Where asthmatic symptoms are persistent, as is not very uncommon, for years some structural change in the organs

of the chest exists; it is then symptomatic asthma. Physical signs. Inspection shows a dilatation of the Pulmonary air cells of one or both lungs; and unusual elevation of the ribs and shoulders. Placing the ear on the chest, sonorous and sibilant sounds, loud but mostly small in calibre, are found to take the place of the inspiratory murmur; these sounds change their locality frequently. As the attack gives way with expectoration, some mucous rale is heard.

Diagnosis.— Asthma, in its common form, is generally considered as allied to consumption; the cough, and

expectoration, with shortness of
breath, being common to both.
But in consumption the cough is bad
on going to bed, and getting up; but is
not especial, except in the more
advanced stages of the disease. In
consumption the lungs are in a state
of decay; and are growing less steadily;
there seems to be a steady progress
to the grave; and if there is a cure,
the patient can never be perfect—
because a part of the lungs have
been destroyed, and they can not
be replaced; and the lungs, being
partly destroyed the patient cannot
get enough of air in them to ...

the purposes of life. In asthma, the cough prevails when the attack is going off; the patient has good health during the interval of the attack.— Those intervals are from weeks to months; In asthma, there is no cough, until the violence of the attack is passed, which is after the turn of the night, when the symptoms begin to ameliorate. There is no destruction of the substance of the lungs, the lungs are all there, but the patient can not get enough air out; it is confined in the lungs, distending distressingly. Bronchitis is known from asthma, by the

febrile condition, and the continuing of cough, during the whole twenty four hours. In asthma the cough prevails, only when the attack is going off. Angina pectoris, by the extreme pain. and localization of the distress about the hart. Prognosis.— Asthma, seldom destroys life, until the patient is advanced in years. It seems to be incurable. the attacks may be warded off, by proper care and medical counsel. But dilatation of the pulmonary air-cells, and enlargement of the hart, may

follow in protracted cases, [illegible]
down the mouth. Males have
it more often than females. it may
occur at any age. Bronchial
asthma very often results from
constitutional disturbances, in
which there is either too little or
too much electricity generated
in the system; in the first in-
stance, producing an excess
of the alkaline fluids by a partial
stoppage of electrical radiation;
and in the last, producing a pa-
sis of the nerves, [illegible]
the respiratory apparatus, of an
unhealthful [illegible]

of the natural electrical radiation
of the fluids. Therefore the patient must
either seek a climate congenial to
his abnormal condition, or have
such medical treatment as will
change it, and render it naturally
conformable to the atmosphere
in which she lives; during the
attack, our aim must be to
give relief, by relaxing spasm.
Ipecacuanha wine, with tinct-
ure of lobelia, one half fluid drm
of each every one hour until
nausea or expectoration is induced;
Hoffmans anodyne, in one half
[illegible] one drachm doses,

will sometimes do great good. Ipe-
cacuanha, lobelia, and hydrocyani-
acid, &c. Dilute Hydrocyanic acid,
11 drops; syrup of wild cherry, and
camphor water, each one fluid
ounce; mix. Dose, a teaspoonful
every two or three hours. Smoking
tobacco is relieving in some instances;
smoking cigarettes of stramonium
leaves in others. More still find
comfort in breathing the air
in which are burned papers
which have been soaked in a
solution of nitrate of potassa.
Inhalation of [illegible], the warm
mustard bath, &c., may
be used.

tion the secretions are estab-
lished and the surface is
then covered with thin
transparent mucus.
Later on in the disease the
secretion becomes thicker
consisting of mucus and
pus mingled with epithel-
cells that are exfoliated from
the inflamed surface. Inflam-
mation of the mucous
membrane below the larynx
tends to [illegible].
Bronchitis follows the [illegible]
of [illegible] and in
cases where it is incident
to some other pulmonary [illegible]

the latter part of autumn winter and spring when the atmospheric changes are frequent and cold. Bronchitis is frequently pro-duced traumatically by the local action of irritating matters such as chlorine and sulphurous acid gas heated air, irritating powders etc. It is developed in some persons by emanations from new hay, feathers, etc. It is much more apt to attack persons that spend most of their time in doors than those out doors

in ... ...
affection of the ... ...
above, the symptoms of
bronchitis differ much in
contrast with those of pneu-
-monia or pleurisy, the pain
is not sharp, lancinating
but rather of an obtuse char-
-acter, and is always sub-
-sternal, the patient experi-
-ences a sense of tightness
beneath the sternum. There
is also a feeling of soreness
within the chest during
the acts of coughing. An
attack of bronchitis ...
... ... be a distinct chill

[illegible]st time expectoration commences, it is at first small and viscid and in severe cases occasionally streaked with blood. This blood streaked expectoration of bronchitis [illegible] differs from the [illegible] colored expectoration of pneumonia. If the disease progresses [illegible] a few days the expectoration becomes more abundant and changes into thick yellowish, sometimes greenish [illegible]. At this stage of the disease the [illegible]

during which expectoration
is scanty. The second stage
extends from the time
that expectoration becomes
abundant to convalescence.
Subacute Bronchitis is
in common language
a slight cold. It begins
with coryza and runs
the same course as the
acute variety. The only
difference being the [illegible]
[illegible] of the attack. It is
not severe enough to [illegible]
patients in doors. Physicians
are very seldom called
upon to treat subacute

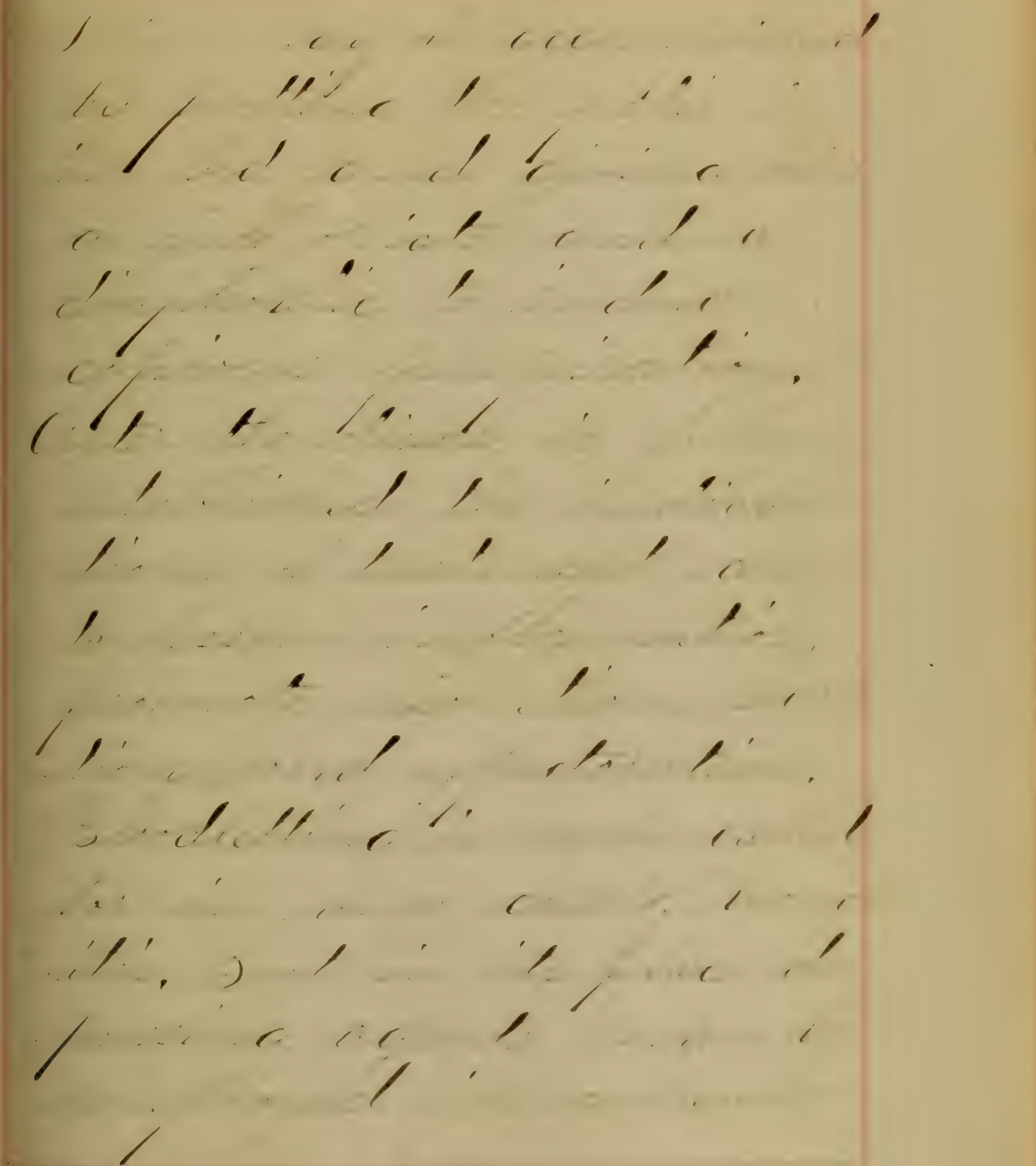
bronchitis. Patients either allow the disease to run its course or resort to some domestic treatment.

Chronic bronchitis is a subacute persisting inflammation of the bronchial mucous membrane.

It is far less frequent than the acute form. If it does exist it is usually a sequel of the acute variety; but the inflammation may be subacute from the start. It occurs more frequently in the old than the young,

The anatomical characters are the same in character as in the acute disease. The only difference being in degree. The mucous membrane is red, swollen and softened. These anatomical changes may be universal or may be limited to patches. The inflammation may be limited to the larger or may extend more or less to the smaller tubes. Chronic bronchitis involves the same causes as the acute variety in those cases in which it is preceded

diagnosis



hydrocyanic acid [illegible]
[illegible] employed. And finally
patients should always
have good hygienic
treatment. They should
be kept warm and dry,
have plenty of good nour-
-ishing diet etc.

A Thesis

Hemiplegia.

W. H. Marsh.

1876

Hemiplegia.

By Hemiplegia is meant a paralysis of a lateral half of the body, i.e. of the upper and lower extremity of one side. The muscles of the face may be involved in some cases and not in others. As a rule the muscles of the eye are not often affected, and if they are, they soon recover. The muscles of the neck and trunk are rarely if ever affected and Dr Broadbent's explanation of this exemption is according to [illegible] the best that has been put forward.

"Dr. Broadbent maintains that the reason of this exemption is to be found by comparing the muscles paralyzed with those that escape paralysis.

He divides them into two classes. One class, those muscles on one side of the body, as the extremities, that act independently of those on the other side; and a second class those as of eyes, neck and trunk, that act in concert; these muscles act in pairs as is more easily seen; we cannot move one eye without moving the other, neither can we expand one side of the chest alone; [illegible] muscle [illegible] by itself the other may be in a state of rest."

A reexplanation of this fact is that where muscles thus always acting together, it is very probable that the spinal nuclei of their nerves are connected by commissural fibres, and the nuclei of such muscles on each side of the spinal cord are so intimately connected by these commissural fibres as to render them in effect a single nucleus; and as it is generally received that the Corpus Striatum is the organ through which the 'Will' acts on muscles of voluntary motion on opposite sides of the body, this nucleus will have fibres from each Corpus Striatum going to it, and will be called into action by both

but it may also be called into action by either separately and be effected more accordingly as the commissure is more or less perfect".

"Now with the muscles of the arm and leg, or those that act voluntarily, they suffer most, because they have no communication with the uninjured hemisphere, - this is due to their being called into action by regions of the brain that act independently, and as a cause of this the special nucleus of the nerves of these muscles are not connected with those of the opposite side. In the muscles of speech there is an apparent contradiction of this explanation for no muscles act more bilateral

in pairs than these do the explanation of this is they are called into action rather by voluntary power than by an automatic stimulus." (Bastian.)

The paralysis in some cases is not limited to motion only but involves sensation also, though where both are lost, sensation may be regained after a time, though the loss of motion continues.

The loss of motion may exist to a greater degree in one extremity than it does in the other, and is generally greater in the upper, and continues longer than in the lower extremity.

The arm and hand recover first as they do in some cases then the cause of the paralysis is seated low down [illegible]

the cerebral hemisphere.

In cases of complete motor paralysis, movements may be produced in the paralysed limb by tickling the soles of the feet, or by pinching; these are reflex movements and are made without the patient exercising any will to make them.

The condition of the muscles vary in different persons, in some they are soft and flaccid, in others they are rigid and stiff, in others they are atrophied to such an extent that the differences [illegible] on the bones of the part affected may be made out with the greatest ease. When the muscles of the face are implicated, it is generally the same side of the face as the body affected, except [illegible]

opposite side of the face may be paralysed; this fact is due to the decussation of the fibres of the pyramids and when this form of paralysis occurs the pons Varolii is the seat of the disease. On the paralysed side of the face the expression is entirely lost, and when the facial muscles are excited to action, as in laughing, the mouth is drawn to the opposite side. Voluntary power over the obicularis palpebrarum is rarely lost, though it may be impaired to a slight degree. When the tongue is protruded the apex points to the paralysed side, this is due to paralysis of the muscles on one side, that move the tongue, they run from the chin to the base of the tongue, and when there is paralysis existing on

one side, the tongue is protruded by the muscles of the other side, and they moving on one side only, draw the base to that side, and the apex point to the other. The soft palate may be involved. This causes difficulty in swallowing and fluid may be regurgitated through the nose; the uvula is drawn to one side, though this is not decisive evidence of paralysis as it may be seen in healthy persons.

Hemiplegia may be developed in various ways. The patient may suddenly at meals, reading, walking or riding, he experiences a momentary giddiness, bewilderment or confusion of ideas, if standing he falls down due to the loss of power in the leg, he may experience no pain. Though

There may be a sensation of numbness in the parts, but there is no loss of sensation or motion. Sometimes it may come on more gradually, there is weakness of hand or arm or of leg which after a time becomes more decided. Again paralysis may come on in the form of an epileptic fit, the patient falls down insensible and convulsed, after he is restored, he is found to be paralyzed. It may come on in the form of Apoplexy the patient is insensible and in a profound coma. The paralysis may be seen during the attack and may continue after recovery. It is impossible to tell during an attack what its duration will be, or what amount of improvement will take place, if life last more or less improvement may take place.

but it is gradual. If sensibility is lost it is the first to be recovered.

Paralysis of the face diminishes or disappears in a short time. Improvement as a general thing begins in the lower extremity, and progresses more rapidly than in the upper; the patient may be able to walk while the arm hangs useless at his side; exceptionally though the leg may remain paralysed while the improvement takes place rapidly in the arm.

Remote effects upon the paralysed parts, are atrophy of the muscles, due no doubt to the nonusage of the affected limb; though Bastian quotes several cases in which there seemed to be a special wasting, coming on within a few weeks of the

onset of the paralysis. Other effects are contraction of certain muscles, contraction of the flexors of the forearm is most generally observed. This according to Dr Todd, was due to the process of cicatrisation taking place at the seat of the brain lesion; others think "it is due to certain nutritive changes that are set up in the nerves, muscles, and joints of a limb paralysed permanently; Whether these changes are due to the brain lesion, or to the influence of the extension of — as Bastian terms them — secondary changes in the spinal cord, occasioned by damage to the motor tract in the brain; it is not easy to decide."? Dr Weir Mitchell has observed that in hemiplegia the nails of the [illegible]

the affected side either ceased to grow or increased at a much slower rate than those of the sound side and hence, that the resumption of their growth is a forerunner of return of power to the affected limb.

There are two conditions connected with the speech of a hemiplegic case in which there is difficulty of articulation due to paralysis of the tongue, the lesions in these cases are situated in the pons Varolii, and another called Aphasia or Amnesia in which there seems to be an incoordination of action in the higher cerebral centres. There is an irregular action of those nervous processes by which the patient renders himself intelligible to others. In these cases the patient knows what he wants to say

But there is a vacillation or delay in the utterance of the right word and sometimes may substitute an entirely wrong word, he may call things by their wrong names; although knowing he makes these mistakes he is unable to prevent them, and attempts to correct them makes matters worse.
Accompanying this condition at times is difficulty in writing; the patient may be able to perform the mechanical act, though he cannot group the letters of a word correctly, or writes words that are entirely different to those he wishes to employ. In these conditions the seat of the pathological changes is principally met with, either in, or around the third frontal convolution of the left side, in the white substance

between this convolution & left Corpus Striatum
or in the left Corpus Striatum itself.

The diagnosis of Hemiplegia is
not of itself difficult; a slight degree
may escape observation, and the patient
may not be aware of it himself.
Making the patient grasp the hand
of the physician, with each one of
his in succession; or causing him to
stand successively on each foot
successively he will be able to tell
if there is any loss of power.
The sensibility of each on the two
sides can be measured by compasses,
and of pain by pinching or pricking
the corresponding limbs.

The next thing is to diagnose the

situation of the cause, rather than the cause itself as the prognosis, as a rule is affected by its seat" (Prof. H. Miles). According to Brown-Sequard and M. Callender, lesions of the right hemisphere, caeteris paribus, are more frequent, and more rapidly fatal than those of the left hemisphere; also that disorders of nutrition on the paralysed side are more frequent with lesions of the right, than with those of the left side of the brain. Hughlings Jackson is of the opinion that double optic neuritis is more frequently associated with disease of the right than with disease of the left hemisphere.

The regional diagnosis of disease of the brain is one of difficulty on account of the obscurity in which it is involved. The physiology of the brain must be fully made out before we can clearly diagnose the pathological changes that occur in disease. But at present we must know clearly, and understand what facts that have been positively ascertained relating to the association of certain groups of symptoms with brain lesions in different localities of that great organ, as has been based on trustworthy clinical and pathological observations. The following diagnoses I have taken from Gairdner's work on

"Lesions of the central part of the pons Varolii give rise to apoplectic symptoms, coma, insensibility of the conjunctiva, reflex movements, and contracted pupils. The patient, when the lesion is not large, after a time recovers from the coma and regains his consciousness gradually. There is found however a paralysis more or less equally distributed over the two sides of the body, with a perversion of sensibility in one or more limbs; there is also irregular paralysis of the face in which the eyelids, mouth and tongue are involved.

Injuries to the lower half of one lateral region of the pons give rise to a paralysis, in which there is facial

paralysis on the same side as the injury and a motor and sensory paralysis of the limbs of the opposite side. It may be developed gradually or the onset may be sudden.

In injuries to the upper half of one lateral region, the facial paralysis is on the same side as the paralysed limbs. This is due to implication of fibres of the facial nerve above their decussation in the pons. In both of these conditions the facial paralysis is well marked, and sensation is involved to a greater or less extent, as the lesion nears the anterior or apex of the pons. The fifth nerve is frequently involved in these lesions

giving rise to Anaesthesia or hyperaesthesia on corresponding side of the face and may also impair the sense of taste.

In those lesions of the pons that irritate the fourth ventricle, sugar may be found in the urine. Early contraction of the muscles of the lower limbs are often met with, in lesions of the pons.

In lesions of the Crus Cerebri some of them can be diagnosed with certainty In injuries to the inner & inferior part of the crus, near the pons, the third nerve on the same side becomes paralyzed at the same time that paralysis of the opposite side of the body occurs. When the third

nerve is paralysed, it is shown by the existence of ptosis, dilatation of the pupil, external squint and immobility of the eyeball except in two directions, slightly outward by forced contraction of the external rectus, and slightly [illegible] by means of the superior oblique, and if the lid be raised diplopia may be found to exist. The temperature of the paralysed limb, in lesion of the cross, is found higher than that of the non paralysed side.

In lesions of the Corpus Striatum there is no decided mental disturbance, but some slight thickness of speech, the palsy of the tongue

points to the paralysed side and the facial paralysis is on the side as that of the limbs.
In paralysis due to lesions of Optic Thalamus, it is said that the paralysis is much less marked than if occasioned by injuries of the same extent in the Corpus Striatum: but early tonic and clonic spasms are especially frequent with lesions of this body.
Aphasia is not so frequently met with as in lesions of Corpus Striatum.
In lesions of the lobes of the brain, those of the anterior lobe may involve the olfactory nerve, thus causing impairment of the sense of smell on same side of the brain as the lesion. Where there is lesion of

the left frontal lobe there is paralysis of the right side with aphasia conditions.
In hemiplegia due to pressure on the cortical substance of the brain, or lesions of the substance itself we have headache, loss of consciousness, more or less vomiting, convulsions of tonic and clonic convulsions without loss of consciousness.
In some cases no definite paralysis exists, and in others just a partial hemiplegia. If the lesion is in the third left frontal convolution we have aphasia connected with the hemiplegia; and in other cases we have aphasia of speech in connection with well marked paralysis of the

leg and arm without paralysis of the face. The loss of sensibility is very slight in cases of hemiplegia due to superficial lesions, and in a few cases we may have a slight hyperaesthesia. It is a notable fact that in nearly all cases the temperature of the paralyzed limb is higher than that of the non-paralyzed side.

The causes of Hemiplegia are, Hemorrhage either on the surface or into the substance of the brain, Thrombosis, Embolism, Abscesses, Tumors, Meningitis causing exudation of lymph and pressure, Softening, Traumatic injuries and functional

disturbances. M. Duroy has reported three cases and Prof Eulenburg one case in which the hemiplegia was caused by the patient being struck by lightning. It may also come from brain disease.

The prognosis of Hemiplegia is a difficult problem; and the correctness of it depends on our arrival at an accurate regional & pathological diagnosis, taken in connection with the age and health of the patient.

There are many separate questions to be answered, and each individual case must be made the subject of a special study. There is the greatest variation and diversity presented

the patient, in regards to their age and health, and to the extent, suddenness and pathological nature and situation, in different parts of the brain, of disease.

The prognosis in functional hemiplegia is always favorable. Recovery only involves a question of time, and it is always important to discriminate between cases that are and those that are not functional.

In cases due to apoplexy the question is, whether the patient will die during the attack? In these cases we must look to the depth of coma, what the

the case presents. Signs that point to a fatal issue are, inability to rouse the patient, loss of reflex action in the conjunctiva, involuntary evacuations from the bladder and rectum, laborer respiration the cheeks puffing out at each expiration, quick and irregular pulse and temperature lower than normal.

If the Apoplectic seizure itself is recovered from, febrile reactions accept to be manifested, should the patient survive the first ten or twelve days, the prognosis is rather favorable as regards the fatal result of the lesion, while

complications. Where cases of [illegible] the prognosis should be cautious and guarded. As regards the return of motor power in the limbs the prognosis rather unfavorable.
The later the first signs of return of motor power are in showing themselves, the less probability is there of complete recovery.
In cases in which rigidity comes on soon after the onset it is very unfavorable. Persons experiencing one attack are liable to recurrence of them and thus liability increases with age of the patient.

The treatment of the disease I have been considering, is directed to the causative and concomitant affections. Its measures, to be addressed to the morbid conditions on which the paralysis depends, must vary according to the nature of those conditions: it should be our duty to determine their nature in individual cases if possible.

In the Apoplectic condition little active interference is necessary, much may be done though by care and attention. If there is much heat of the head, and the vessels throb violently, apply bounded ice in a bladder, and let the patient lie in a cool room with head

shoulders raised. Revulsive means may be used to diminish the congestion of the head; mustard plasters to the extremities, feet and legs with hot flannels.

If there is excessive force and frequency of the pulsations, and the patient can swallow it may be controlled by aconite. If the breathing is slow and the pulse weak and feeble, the face pallid and surface cold, this calls for cautious stimulation.

The state of the patient must be watched carefully, and if it is necessary to unload the bowels it had best be done by means of

an active cathartic. Castor oil from the facility with which it may be given, its efficiency and quickness of operation is to be preferred. Also operation may be promoted by the means of enemas.

The bladder must be looked to, and if necessary the urine drawn off by means of the catheter.

After recovery from the comatose condition, perfect rest should be insisted on, both of body and mind. The diet should be carefully regulated.

During the time the patient is confined to bed great care must be taken to prevent bedsores on the prominent parts.

If the paralysis be due to syphilis then mercury and iodide of potassium are the remedies indicated. The use of mercury may be carried to the point of salivation, and the iodide to tolleration.

The other part of the treatment is to bring about, or facilitate a return of power in the paralysed parts. Careful attention should be taken of his general health. He should have nutritious and easily digested food, and should be kept from all mental perturbations.

After a time in connection with these, other remedies directed to the paralysed limbs should be

used; such as frictions with Stimulating embrocations, or with flesh brush; passive movements, also occasional active exercise, bearing in mind though always to stop short of the production of fatigue.

In the early stages of hemiplegia, Electricity should not be resorted to. Where the paralysis has existed for a long time, and the muscles are wasted great benefit may often be obtained from vegetable tonics in combination with Strychnia, beginning with from one fortyeighth to one thirtieth of a grain three times a day.

In these cases faradization is often of great benefit. Ablutions and

improves the condition of the muscles and tends to keep them in a state of preparation, which renders them capable of responding to the will when the conditions sustaining the paralysis are diminished or removed.

In those cases where contraction of the hand and wrist comes on early this may be arrested or retarded by the use of the constant current, and in those contraction that come on at a later period, it may be used with great benefit.

The treatment in regard to the loss or diminution of sensibility on the paralysed side, requires no special attention. The tendency

is for this condition to diminish of itself, though we may use the same measures as we use in defective motor power.

In those cases in which the patient complains of coldness, or of numbness in the paralysed parts, Bastian recommends the use of iodide of potassium, alone or in combination with the bromide, though some cases, he says, resist the influence of all drugs, and only yield to the ameliorating influence of time.

A Thesis

On Scarlet Fever

Submitted to the Examination

of the

Provost, Regents and Faculty of
Physics

of the

University of Maryland

for the

Degree of Doctor of Medicine

By

W. [illegible]

and sequelae, These occur in the
patient die within two or three days
dicating a sluggish capillary

[illegible] nervous syste[illegible]
[illegible]g after the fu[illegible] development
of the Eruption [illegible]
[illegible] fatal.
Scarlet [illegible]
[illegible]ay coexist during [illegible]
of the latter, diarrhoea with
[illegible] of [illegible]
[illegible] pursistent constitute a
[illegible]ious complication, It is due
to [illegible]
[illegible]
Peritonitis, [illegible]
[illegible] with great
danger. Nephrite [illegible]
[illegible]
[illegible]

[illegible]t should it appear [illegible]

[illegible]

may exceed 6 [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] the citrate of magnesia, free ventilation, cooling drinks, and light nourishment, is all that is necessary. Vigilance may be retained by the tepid bath, sponging, or an anodyne may be required. If the form [illegible] become flooded with cephalalgia and other nervous symptoms, cold applications should be made to the head, and the face washed with cold water. If the [illegible] be dry and hot, [illegible]

with delirium the tepid bath should be used, if practicable, if not frequent sponging should [illegible]

In malignant ca[illegible] [illegible] distroy life [illegible]

In epidemics of Scarlet Fever small
doses of Ext of Belladona may
be given by way of prophylaxis

An Inaugural Essay

on Lust.

To the Provost,

Regents & Faculty

of Physic

of the University of Maryland.

Respectfully Submitted

by the Author

Feb. 14, 1876

Discourse on Lead.-

This metal has long been known to the Profession of Medicine on account of both its physiological and toxicological effects on the System. Several of the officinal preparations of Lead have been known to the Profession as far back as the sixteenth century, most prominent of which is the "acetate of Lead".

Mode of [illegible] — [illegible] classed under the head of astringents. As an astringent it has the power of corrugating constringing, and contracting tissue. Again it is marked by the chemical and dynamical change produced when used in medicinal quantities, By chemical, we [illegible] the power possessed by [illegible] [illegible] manifest — in the coagulation of the albumen and fibrin of the blood. By dynamical is understood the material change in tissue caused by the corrugation and contraction of a [illegible]

afterwards administer
some one or more of the
sulphates "Magnesia Sulphate",
in order to form Sulphate
of Lead, which is insoluble
and thus prevent absorption.
Alum is one of our best
agents in this disease,
it does not act by forming
the sulphate of lead as
was once supposed but
is found to be useful in
constringing the dilated
vessel, [illegible] [illegible], con-
taining [illegible] [illegible]
will assist in eliminating,

An
Inaugural Dissertation
on
Diphtheria
Submitted to the
Provost, Regents, and
Faculty of Physic,
in
The University of Maryland.
by
H. Hubert Biedler
1876.

Gentlemen of the Faculty

I have se-
-lected for my subject Diphtheria,
and it is not my province
to go, into minutia, but to
describe the most practical and
leading features of the disease.
This affection has prevailed at
times as an epidemic, in va-
-rious parts of the world, from
a remote period, It has been
described by writers in differ-
-ent countries and epochs,
under a variety of names,
such as, "Ulcus Egyptiacum
vel Syriacum, Garrotillo, —

Malignant - Sore-throat, Epidemic
Croup, ect - In this country,
until within the last few
years, it has occured rarely,
and to a limited extent, during
the present century. It was
described by Bard, in 1782
under the name "Angina-
-Suffocativa." The distinctive char-
-acters of the affection were
very clearly elucidated by
Bretonneau, in 1821, 1825, and 1826,
who applied to it the term
Diphtherite, whence originated
the name Diphtheria.
Anatomical Characters -
The prominent - or leading, -

characteristic feature, of this af-
-fection, is the presence of a false
membrane. The fauces in a
greater majority of cases, is
primarily affected, and, in
many cases the, local affec
-tion is limited to this situa-
tion. The first appearance is
redness of the fauces accompa-
-nied by more or less swelling
of one or both tonsils. The pseu-
=do-membrane, at first thin
and semi-transparent, soon be-
-comes opaque and more or less
thick. It, is at first white or
ash-colored, but it generally be-
comes dark and even black,

from decomposition and imbibi-
-tion of blood. It may become
colored from remedies and
matters vomited. The patches
of false membrane present
well-defined abrupt margins.
When it is thick, it resembles
wet parchment or chamois leat-
-her. Different cases differ in
the extent of the affection wit-
-hin the fauces. One or both ton-
-sils may be alone affected,
sometimes these bodies are swo-
-llen so much that they al-
-most meet, and in some
cases not so much. The false
membrane may extend over

the posterior part of the pharynx, the palatine arches, the uvula, and, forward, over the greater part, or the whole, of the soft palate. It may be uniformly spread in these situations, but is oftener in distinct irregular patches. With the forceps the false membrane may be removed. The false membrane, when loose and dark or black, presents an ulcerated or gangrenous appearance, which is implied in some of the names formerly given to this affection. Generally the false membrane is thrown off within 3 or 4 days.

and sometimes not until the twentieth day. Sometimes it is followed by a second, sometimes by a third, and even a forth formation of false membrane. Of late pathologists distinguish the false membran, from the the exudation which occurs within the larynx and trachea, in fibrinous laryngitis, or true croup. The former is made up of cellular elements, and does not consist of fibrin or lymph. On the other hand, in fibrinous laryngitis, the false membrane, consist, partly of exuded lymph. The lymphatic glands of-

the neck, and especially those be-
-hind the angle of the jaw, are
more or less enlarged, and pain-
-ful. If the affection be limited
to one side, the glands on that
side may be alone affected. The
glandular affection rarely proceeds
to suppuration. The diphtheritic
formation within the throat, is
to be discriminated, from, phar-
-yngitis with follicular secretion,
which is often called diphtheria.
In mild cases of diphtheria the
disease manifests itself locally
in the fauces alone, but in
cases, of more or less severity,
and danger the diphtheritic af-

-fection often occurs in other situations. The posterior and anterior nares, on one or both sides, may be affected. The Eustachian tube is sometimes involved. The mucous membrane of the cheeks and gums may present patches of, or be completely coated with, false membrane. The eyes are sometimes invaded, and the diphtheritic conjunctivitis involves considerable danger of destruction or impairment of vision, chiefly from opacity of the cornea. The diphtheritic inflammation sometimes invades the Oesophagus,

and may extend quite to the stomach. A more serious extension is into the larynx. The disease then involves the morbid conditions which exist in true or diphtheritic croup. As in croup, the inflamation and false membrane extend to the trachea, and may extend into the bronchial tubes, reaching, in some cases, the tubes of small size. As a rule, however, it does not extend beyond the trachea. The parts communicating with the fauces are not the only parts liable to become involved in cases of

diphtheria. The meatus auditorius externus, the anus, the vulva, and prepuce, are sometimes affected. The affection sometimes appears on the skin, in parts excoriated, such as ulcers, bed-sores, in short, wherever the skin is deprived of the epidermis. There are no known anatomical characters of this disease in addition to those belonging to the diphtheritic inflammation of certain portions of the mucous membrane and skin—

Clinical History—

Diphtheria presents in different—

cases such differences, as regards general and local symptoms, the latter incident especially to the localizations of the diphtheritic affection, that some writers have instituted several varieties of the disease. Without adopting formally any of these, it will suffice to indicate the important diversities in connection with the symptomatology. A marked point of difference relates to the development of the disease. The attack is occasionally acute, commencing with a chill more or less marked, which is followed by high febrile

movement. But not infrequently the development is gradual and insidious, the patient complaining of indefinite ailments, and the characteristic affection of the throat, being discovered on inspection, when there were few or no local symptoms pointing to the existence of the disease. After the development of the disease, the symptoms are naturally divided into general and local, the latter being seperable especially to the parts affected with diphtheritic inflammation. The affection of the fauces is rarely accompanied with pain or

soreness, hence a liability to overlook its existence. Deglutition is sometimes painful, but, in other cases, unattended with pain. Incomplete paralysis of the muscles concerned in deglutition, which will be noticed as a sequel, is sometimes a concomitant of the disease, giving rise to more or less difficulty of swallowing, especially liquids. The breath in some cases is notably fetid, suggesting the idea of gangrene of the throat or lungs, events not very frequent, in the history of the disease. The affection of the anterior nares is preceded and ac-

-companied by a discharge which produces irritation and swelling of the upper lip, limited to one side of the lip, if one nostril only be affected. As a rule, the gravity of the disease is commen-surate with the extent of the local affection and the abun-dance of the exudation. In the cases in which the disease is mild throughout its career, the diphtheritic inflammation is con-fined to the fauces, or, exception-ally, to a limited space in some other situation. In cases of greater or less severity, the clinical his-tory embraces symptoms seperable

to the different anatomical systems, viz., the circulatory, cutaneous, respiratory, digestive, nervous, and urinary. The pulse in some cases becomes very frequent, in other cases the acceleration is moderate, and it is sometimes slight. It is sometimes irregular — a symptom of unfavorable omen, if it be independent of pre-existing organic disease of the heart. Hemorrhage from the nostrils is not an infrequent symptom; it occurs occasionally from the throat and mouth. Epistaxis is sometimes so profuse as to require mechanical means for

its arrest. Under these circumstances it denotes great gravity and danger, and hemorrhage in other situations, is to be regarded as Ominous. The skin rarely presents much increase of heat. The range of temperature, as determined by the thermometer in the axilla, is less elevated than in most other acute diseases. The disease has no characteristic eruption; rose-spots are sometimes observed and other forms of eruption, viz, Erythema Nodosum, Urticaria, and Sudamina, but these are accidental. Vomiting is a frequent, and in some

cases a prominent symptom. This, as well as anorexia, is serious from the interference with alimentation. Diarrhoea is not uncommon, and is a symptom of bad omen. In the cases in which the diphtheritic affection extends into the Oesophagus, false membrane is expelled by vomiting in the form of ribbons, provided death do not take place before the exfoliation is completed. In the majority of cases the mind is unaffected. Slight passive delirium occasionally occurs. Convulsions and coma are rare, but both are of occasion

-al occurrence. Convulsions have been observed at all periods of the disease; coma is the fore-runner of a fatal termination. It is probable that coma and convulsions, occuring in this disease, are generally due to Uraemia. Albuminuria is a frequent symptom. The proportion of cases in which it occurs is variable. Generally, the albumen contained in the urine is small, but abundant. Haematuria has been observed in cases presenting the symptoms of purpura. As in the other febrile diseases the-

urine contains a larger amount of urea than in health, a fact showing an increased waste of the tissues. The duration of the disease is from one to two weeks. In fatal cases the duration may fall short of a week, death sometimes taking place within forty-eight hours. On the other hand, the illness may continue for an indefinite period, beyond the maximum duration of the cases of the disease, owing to consecutive affections or sequels. Its concurrence with Scarlatina, Measles, and Variola has been observed. The sequels of this -

disease are important. Among the most common are, Anae-
-mia and general debility, lasting for a considerable period. Paralysis affecting more or less of the vol-
-untary, and sometimes the in-
-voluntary muscles is a charac-
-teristic sequel. Patients generally recover from the sequels of this disease.

Pathological Character.—

Diphtheria is manifestly a con-
-stitutional disease. The diphthe-
-ritic affection is the local ex-
-pression of a special morbid condition of the system. And in this, as in other constitutional

diseases, the essential morbid con-
-dition is supposed to involve
blood-changes, the nature of which
remains to be ascertained. Symp-
-toms denoting constitutional dis-
-turbance precede the occurrence
of diphtheritic inflammation. The
latter, therefore, is not to be
regarded as giving rise to the
former. Moreover, the constitu-
-tional disturbance is often out
of proportion to the local man-
-ifestations. By some French writers,
under the name diphtheria is
embraced the affection of the
larynx and trachea known as
diphtheritic laryngitis, or true

croup. The latter affection is identical with diphtheria in so far, as the inflammation is characterised by the formation of a false membrane. As already stated, the false membranes in the two affections present certain points of difference. Diphtheria occurs and may prove fatal without any affection of the larynx. If the term true croup be applied to laryngitis whenever the inflammation is pseudo-membranous, it is proper to say that croup is liable to occur as an intercurrent affection in certain cases of diphtheria

These cases differ materially from cases of croup, occurring irrespective of diphtheria. In cases of diphtheria with croup, the exudation is more abundant and extensive in the fauces than in cases of croup without diphtheria. In the latter, the exudation does not extend to the nares, into the oesophagus, etc., nor does it occur in other situations. The enlargement of the cervical glands is greater in cases of diphtheria, ect.; Moreover, primary croup is a spasmodic affection, whereas diphtheria prevails as an epidemic, and the latter does not,

like the former, affect almost exclusively children. Diphtheria has been considered by some as identical with Scarlatina. The non-identity of these two affections is shown by the absence, in the former, of the efflorescence which is present in the great majority of the cases of the latter; by the recurrence of diphtheria in the same person once or frequently in numerous instances, and by the occurrence of diphtheria in those who have had Scarlatina. The characteristic sequels of Scarlatina, viz., Albuminuria and general dropsy, very rarely follow

diphtheria, and, on the other hand, the characteristic sequel of diphtheria, viz., paralysis, very rarely follows scarlatina. A diphtheritic affection of the throat, however, occurs as an element of scarlatina, and, as already stated, the two affections may exist in combination.

Causation.— Diphtheria rarely occurs sporadically. It is eminently an epidemic disease. Like other epidemic diseases, it has its special cause. It is a mooted question, as to its special cause, whether or not it is a contagious virus or an infectious miasm;

or in other words is the disease communicable?. The affirmation is supported by very many distinguished clinical observers. Prof. R. McSherry says he is of the opinion, that it is communicable too, and that the Parasitic growths are generally found. However as it is not a settled question, it is well for us to be rather careful in warning the friends against a patient suffering with diphtheria. There are very many examples given to prove the affirmation, but, do not think it is necessary for me to mention them here. The susceptibility to the disease is

not equal in all periods of life. In the great majority of cases, the patients are between three and twelve years of age. Persons of any age are, however, liable to be attacked. In respect of variations at different times and places, diphtheria resembles other epidemic diseases.

Diagnosis.— Prior to the occurrence of inflammation and exudation, the disease presents no distinctive traits, and the characteristic local manifestations are preceded by general symptoms for a variable period. These symptoms are sometimes slight, but in some

cases violent.- From Scarlatina, Diphtheria is distinguished by the absence of the eruption, and of the peculiar punctated or brick dust like flush of the T. roat, and "Strawberry Tongue". That Scarlatina predisposes to Diphtheria, as a subsequent attack, I am rather inclined to believe, in fact it seems altogether reasonable. With membranous Croup, it is contrasted in the following manner. That disease is a sporadic and ethmic local phlegmasia, whose general symptoms are, as much, as in any inflammation dependent upon the local affection, while Diphtheria is a

constitutional disorder, usually epi-
-demic, in which the local symp-
-toms are secondary. From Thrush,
Diphtheria is known by the deposit
being much larger and thicker,
never vesicular, and mostly dul-
-ler; and attended generally by
more severe constitutional symp-
-toms. Thrush is much more un-
-common in adults than Diphtheria
; and is never epidemic.—
Prognosis.— The prognosis of this
disease is not generally very favor-
-able. Simple Diphtheria is not
very dangerous to life However
mild a case of Diphtheria may
appear to be, no case is unattended

with danger. The great danger during the first week is from extension of the exudative process to the larynx; and the least laryngeal quality in the respiration heard at the bedside is suggestive of danger. Subsequently to the week death is to be apprehended from exhaustion and loss of nervous energy. An extremely rapid and feeble pulse is of grave import; and a very infrequent pulse is of fatal significance.

Vomiting is another unfavorable symptom, especially if it should occur many days in succession. Hemorrhages and albumen in the

urine indicate blood change of great severity; and if the albumen is abundant; a fatal termination of the case may be expected. In the majority of cases, in which delirium occurs; it proves fatal. The paralytic affections which are liable to supervene do not; in general, involve danger. The danger incident to these affections relates to innutrition in the cases in which deglutition is extremely difficult or impossible, and to dyspnoea when the respiratory muscles are involved in the paralysis. The danger in diphtheria seems to be in proportion

to the youth of the patient. In the child, death is generally due to extension of the disease to the larynx; after puberty it more often occurs from the general affection.

Treatment— No specific remedy having been discovered for this disease, we must be governed in our tentative treatment of it, by our idea of its nature. The treatment must be general and local. Some writers attach chief importance to the local, and others to the general treatment. All agree that it is not a mere local in-

-flammation, but a systemic affec-
-tion primarily; and that its
type is most generally asthenic.
Moderate purgation, as with citrate
of Magnesium, or Rochelle salt,
at the very beginning is well
generally. Chlorate Potassium is
a favorite Medicine in this
disease. An adult may take
from ten to thirty grams, child
from two to five grams. Tinct.
ferri Chloridi is a very use-
-ful remedy in this disease,
in doses from ten to twenty
drops - It is also used very
extensively as a local applica-
-tion. Concentrated liquid food

must, as a rule, be given throughout an attack of diphtheria; milk, beef-tea and very often wine-whey or brandy or whiskey punch, in small quantities at short intervals, according to the degree of prostration present. Ice in small pieces melted in the mouth slowly, is a good application. Muriatic acid and honey, equal parts, applied freely with a large camel's hair brush. As a local application the following is highly reccommended

℞ Liq. ferri subsulphatis ℥iij
Acidum carbolicum grs X
Glycerine ℥j M.
Sig. Apply over f[illegible] every two hours

Gargles of alum or borax or carbolic acid with glycerine are good. Permanganate of potassium is good to correct putrescence. Turpentine stupes and lectos applied to throat do good. When nares are obstructed use an injection of carbolic or Salicylic acid two grains to the ounce of water or quinine with syr. tolu. Many other drugs are recommended but - I think the above list - will suffice in the majority of cases.

H. Herbert - Budden.

Va.